

MANUSCRIPT Time 247

CHAPTER II - THE EXCAVATION AND SURVEY

SECTION I - Romero's Cave (Tm c 247)

This cave, which we called Romero's Cave, is located in the northeastern section of the municipio of Ocampo in the southwestern part of the state of Tamaulipas in northwestern Mexico (See map). Specifically it is on the southeast side of Canyon Flacco near its source in a small range of north-south oriented hills (about 4,000 feet elevation) called locally the Sierra Azul. Canyon Flacco, which flows southeast to northwest in front of the cave, winds around, and then enters the Canyon Infernillo from the northwest. It, in turn, flows southwest and enters Ocampo Canyon just north of the town of San Lorenzo (See areal photograph Fig.). Ocampo Canyon in turn flows southward and is part of the Panuco River drainage system.

Canyon Flacco is about 600 feet deep and its bottom varies between 50 and 250 feet wide. It is completely dry except for the occasional potholes that have rainwater in them. There is gravel, however, along the Arroyo edges indicating that it once had flowing water in it. The side of the canyon may be divided into four tiers. The lowest tier, extending from the bottom to as much as 200 feet, is a vertical wall of eroded limestone. This is capped by a less precipitous slope, often shrub-covered with only occasional outcrops of rock showing, which are from 100 to 300 feet high. Above this is another cliff varying from 500 to 300 feet in height of noticeably bedded limestone. The bottom of the cliff of this third tier is evidently of a softer limestone and water erosion (~~probably by a stream flowing through the Flacco Canyon~~) has gouged out a series of rock shelters and caves. One of these is Tm c 247 (See Fig.).

REPORT OF THE GEOLOGICAL SURVEY

This cave, which we called "Pete's Cave", is located in the northeastern section of the municipality of Oaxaca in the southwestern part of the state of Tlaxcala in northwestern Mexico (see map). Specifically it is on the southeast side of Canyon Fiasco near its source in a small range of north-south oriented hills (about 4,000 feet elevation) called locally the Sierra Azul. Canyon Fiasco, which flows southeast to northwest in front of the cave, winds around, and then enters the Canyon Interoeste from the northeast. It, in turn, flows southeast and enters Canyon Fiasco just north of the town of San Lorenzo (see aerial photograph Fig. 1). Canyon Fiasco in turn flows southeast and is part of the famous river system.

Canyon Fiasco is about 500 feet deep and the bottom varies between 50 and 250 feet wide. It is completely dry except for the occasional potholes that have water in them. There is gravel, however, along the Arroyo edges indicating that it once had flowing water in it. The side of the canyon may be divided into four tiers. The lowest tier, extending from the bottom to as much as 200 feet, is a vertical wall of eroded limestone. This is capped by a less precipitous slope, often shrub-covered with only occasional outcrops of rock showing, which are from 100 to 300 feet high. Above this is another cliff, varying from 500 to 800 feet in height of noticeably bedded limestone. The bottom of the cliff of this third tier is evidently of a softer limestone and water erosion has gouged out a series of rock shelters and caves. One of these is in a 200 (see Fig. 1).

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Romero's Cave Tm c 247 faces northeast looking across Flacco Canyon. It is about 15 to 20 feet above the base of the cliff of the third tier and its top is about 100 feet below the top of the cliff. There is a break in the cliff about 100 feet west of the cave and a narrow passage sloping ^{as through} from this break to the mouth of the cave. The cave at the mouth is about 70 feet across and has a maximum height of 80 feet. It is about 60 feet deep. However, the area that is well sheltered and covered by refuse and is smaller, is only 55 feet wide and about 50 feet deep. Here the ceiling is less than 60 feet high.

The refuse floor of the cave slopes greatly from front to back and slopes gently from east to west for about half its width, while the other half is somewhat steeper due to a talus of rocks that have fallen from the roof. The east half, because of its lack of rocks, was chosen for excavation and here the floor was fairly level. Unfortunately, local treasure seekers had dug five large holes in this floor and, of course, had destroyed valuable archaeological materials.

It was, however, this "gold digging" that brought knowledge of the cave to the attention of the archaeologists. Ignacio Guerra learned from the treasure hunters that they had unearthed "mummies" and had the presence of mind to report this to the Instituto de Antropologia e Historia in Mexico City. The institution in turn had sent Dr. A. Romero and J. Valenzuela in 1937 to investigate the cave. They published a report about their trip and the cave's skeletal

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Plate - (A) - Picture of Cliff

(B) - Picture of Cave

(C) - Interior of Cave

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(C) - Interior of Cave

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Near the end of the first month of our survey in Tamaulipas (December 1953), Ignacio Guerra was contacted and a trip made to the cave. An examination of the profiles of the treasure hunters' pits, as well as the ancient refuse that they had discarded, showed the cave to have archaeological potentialities. Therefore, arrangements were made to undertake a major excavation which began on February 1954. Our general procedure was to move into the area with from 6 to 20 men for a two-week period for excavation and then to come out with the specimens for a rest (and bath) and to purchase supplies during a three or four days' vacation period. Then we would go back again. Actually, five such work periods occurred and our excavation ceased in mid-April 1954. Forty-one days with an average of ten men were spent in excavating Tm c 247.

In excavation we used what might be called a vertical profile stripping technique. To proceed with this method it was necessary first to make a vertical profile at the edge of what was to be our excavation. First we cleaned out two squares north five east five, and north five east ten, which had been pitted by treasure hunters. An attempt was made to dig these in terms of actual strata (that was not very successful). When the squares were completely excavated to a depth of about three or four feet and the vertical profiles clean and drawn, the east end (north five east ten to north ten east ten) and the west end (north five to north ten) were dug by a different technique. In this technique we stripped off the top

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soil zone back two-and-a-half feet from the vertical profile. Actually, one man worked on the profile and removed the top strata by trowel back from the profile to a line that was drawn two-and-a-half feet from that profile. The second man removed the loose fill by shovel and put the refuse and the artifacts (not found by the trowel man) on a screen. The third and sometimes the fourth man then screened this refuse, wrapping artifacts in one package of tin foil, corn in another, obvious domesticated plants still in another, bones in another, pottery in another, and so forth, while the wild vegetable material was put in a bag. At the completion of the stratum stripping in the half square the bag was labelled, the "portion excavated" recorded in our daily diary, and the strata, features, significant finds and speculations put into a section of our note book, called square descriptions. After the first stratum had been removed we dug the next one in the same method until all strata were removed and we had a new profile, two-and-a-half feet east or west of the original one that we had drawn. Then the rest of the square was dug and when it was finished, the profile was drawn and photographed. Such features as found were also drawn separately and photographed and numbered. In such a manner north five, north five west five, and north five east fifteen were excavated. This gave us two twenty-five foot profiles, that is, from east fifteen to west ten along the north five and north ten axis. These were drawn on long profile sheets and the whole profile photographed. Then using the same technique we moved southward into this new profile. First, three alternate squares were dug, west five, east five, and east fifteen by this method just described. When these squares were completed the blocks between, that is square zero and east ten, were removed, thereby giving us a new profile along the zero axis. That was duly recorded. This technique and system continued southward until we reached

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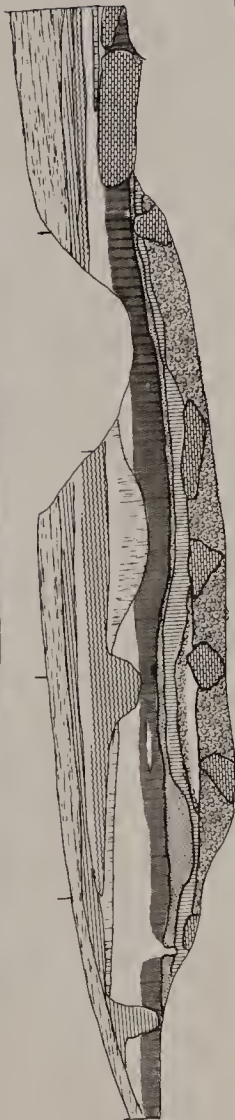
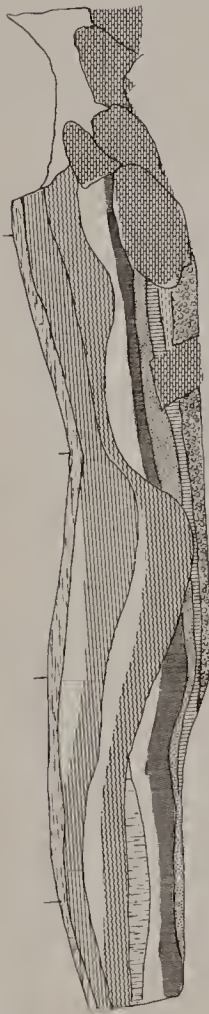
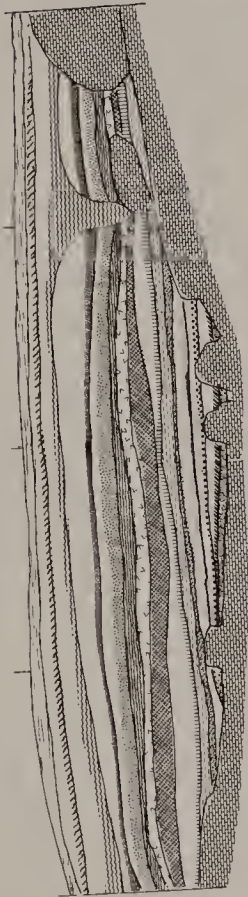
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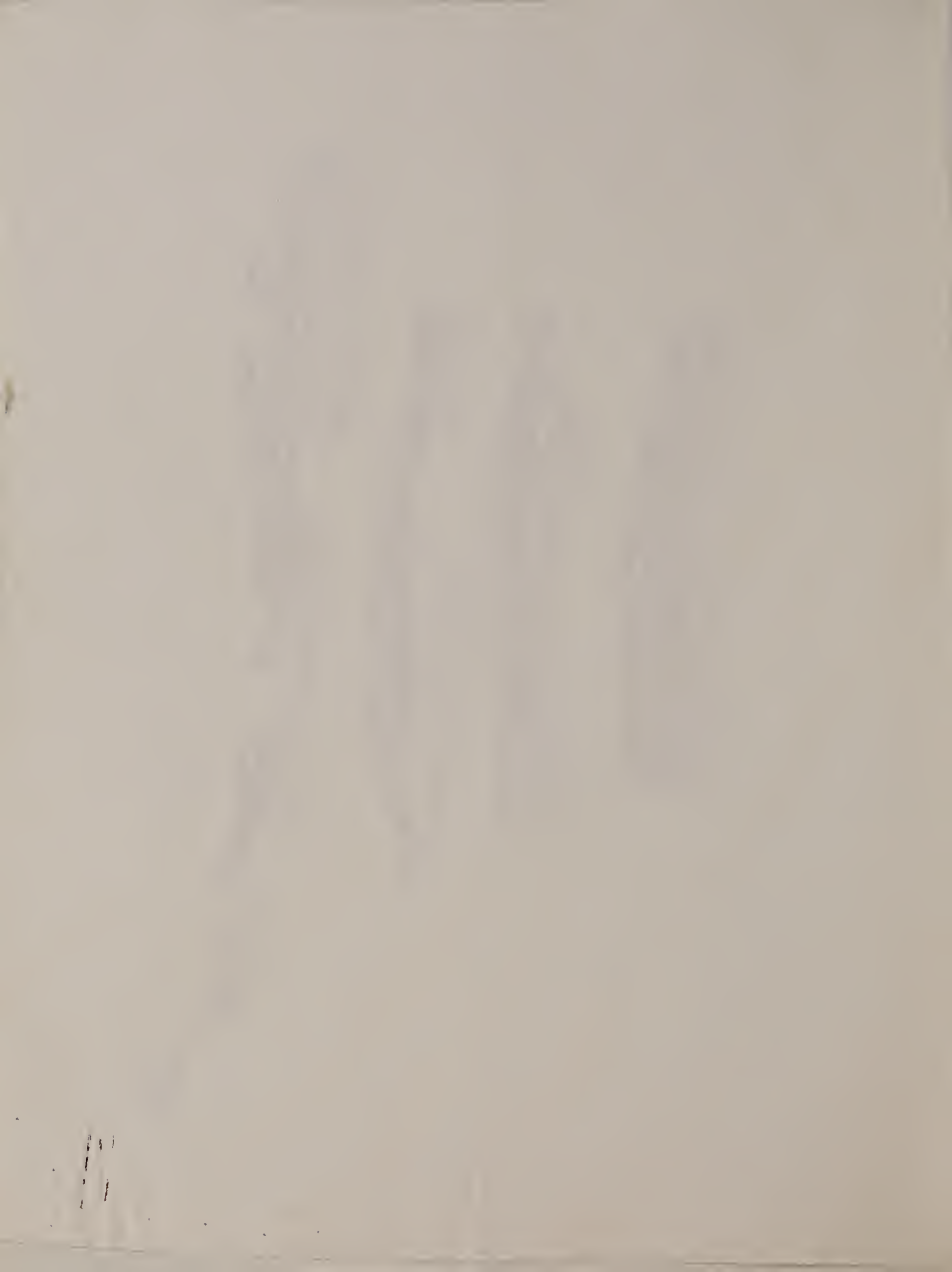


Fig. - Excavation Technique

1. Profile
2. Profile

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finally the back wall of the cave.

The stratigraphy of the refuse in the cave was for the most part easy to discern. There were however certain factors that tended to make it complicated and ~~had to make~~^{make} the enumeration of our excavation ~~level~~^{levels} somewhat complex. The first factor was how we excavated. Usually, it was trowelled down to the actual bottom of a well defined strata and this was recorded as one level. This often meant that included in the same level with the well-defined lowest charcoal or vegetable part was loose ash or cave dust above it. For the most part the ash and cave dust had no artifacts and did not seem to be an occupation level. However, in truth, our occupations and zones included not only that of the actual occupation but any casual or stray find that might have been in the ash still above it. The second complicating factor was that the stratum near the mouth of the cave was less numerous than those at the back of the cave. This was due to the fact that the early occupations occurred towards the wall of the cave, and the later ones were either towards the front or all over. Thus between one occupation and another as we dug forward, new strata would appear. In the field notes these other strata begin to be designated Stratum 1A which was between one and two, Stratum 2A which was between two and three, and so forth. The third complicating factor was that the aboriginal occupants of the cave dug thirty-two pits from one strata to another, thereby mixing some of the artifact material. And finally, the treasure hunters had dug five pits. Fortunately, their material was fairly easy to separate from the other material; nevertheless, they had eliminated cultural assignment of some valuable materials. However, from the excavation and ultimately from the notes, drawings and photographs we were able to attain a fairly clear picture of the stratigraphy and occupations.

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In total, there were twenty-five strata in the cave which contained sixteen occupation levels. In the following chart, I shall roughly correlate the phases, the strata, the levels, and the occupations. Later in the report we shall no longer indicate the levels and these are recorded here in case someone may want to go back to check our original field notes or specimens.

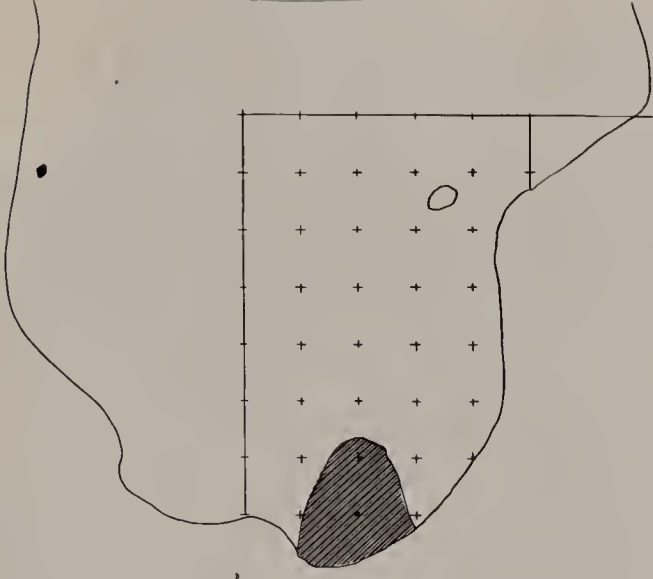
<u>Zones</u>	<u>Occupation</u>	<u>Back Cave Enumeration</u>	<u>Front Cave Enumeration</u>	<u>Phases</u>
Zone A 1				
Zone A	Occupation 16	Level 1	Level 1-2) Los Angeles
Zone B 1				
Zone B	Occupation 15	Level 1A		
Zone C	Occupation 14	Level 2) San Lorenzo
Zone D 1				
Zone D	Occupation 13	Level 2	Level 3	
Zone E	Occupation 12		Level 4) Palmillas
Zone F 1				
Zone F	Occupation 11	Level 3	Level 5	
Zone G 1) Mesa de Gueje
Zone G	Occupation 10	Level 4A	Level 6	
Zone H	Occupation 9	Level 4	Level 7	
Zone I	Occupation 8	Level 4B) Guerra
Zone J 1	Occupation 7	Level 5		
Zone J	Occupation 6	Level 6	Level 8	
Zone K	Occupation 5	Level 7		
Zone L	Occupation 4	Level 8) Ocampo
Zone M 1	Occupation 4	Level 9		
Zone M	Occupation 3	Level 10		
Zone N 1				
Zone N	Occupation 2	Level 11		
Zone O 1) Infernillo
Zone O	Occupation 1	Level 12		
Zone P	- - - -	Level 13	Level 9	

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<u>Zones</u>	<u>Occupation</u>	<u>Back Cave Enumeration</u>	<u>Front Cave Enumeration</u>	<u>Phases</u>
Zone A 1	Occupation 16	Level 1	Level 1-2	} Los Angeles
Zone A				
Zone B 1	Occupation 15	Level 1A		} San Lorenzo
Zone B				
Zone C	Occupation 14	Level 2		} Palmillas
Zone D 1	Occupation 13	Level 2	Level 3	
Zone D				} Mesa de Guaje
Zone E	Occupation 12		Level 4	
Zone F 1	Occupation 11	Level 3	Level 5	} Guerns
Zone F				
Zone G 1	Occupation 10	Level 4A	Level 6	} Campo
Zone G	Occupation 9	Level 4	Level 7	
Zone H	Occupation 8	Level 4B		} Inermillo
Zone I	Occupation 7	Level 5		
Zone J 1	Occupation 6	Level 6	Level 8	
Zone J	Occupation 5	Level 7		
Zone K	Occupation 4	Level 8		
Zone L	Occupation 4	Level 9		
Zone M 1	Occupation 3	Level 10		
Zone M				
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Now let us consider each one of the zones in some detail. The lowest zone is called Zone P and is composed of loose gravel and sand. Soil analysis of these materials would seem to indicate that such materials were laid down by a fairly permanent stream. Included in these gravels were a number of large chunks of limestone that had obviously fallen from the roof of the cave. This Zone P and its inclusive rocks overlay the limestone floor of the cave. Now the question becomes as to how this gravel deposit was laid down. There seem two possibilities; one, that these gravels laid down when the present arroyo was being cut (the present arroyo being 300 feet below the mouth of the cave). This hypothesis has one obvious difficulty for the limestone rocks do not seem to be waterworn like they would have been if they were in the permanent stream of the arroyo. The other possibility is that at one time a stream from the mesa above the cave flowed through a sink hole and then out the mouth of the cave and that the mouth of the cave received gravel like it was an alluvial fan. Also, the original tunnel of the stream is now hidden. The lack of wear on the limestone slabs, the gravel over the cultural materials and the higher elevation of gravel in the back and sides of the cave all favour this theory. The lack of gravel on the mesa above and our being unable to find the stream's tunnel are against this hypothesis. Whatever the manner of deposition of the gravel was, one thing seems certain: the gravel was laid down during a wet period.

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— 2000 ft — 1000 ft — 500 ft —

Fig. - Extent of Zone O, Occupation 1 in the excavated area of Romero's Cave.

Overlying the gravels in Zone P in the back of the cave was a dark charcoal-filled brownish strata, the brown being caused by rotten vegetation as well as patches of burnt rock, which is called Zone O. Zone O seems to be the earliest occupation of the cave. In a few spots there is a slight amount of gravel over Zone O, but for the most part there is just cave dust. Culturally, as we shall see, this stratum was laid down by the Infernillo people, and their occupation has been dated between 7,000 and 9,000 years ago. Thus I would guess that Zone O is perhaps 8,000 years old. Pollen from this strata shows that the climate was slightly wetter than today. A further confirmation of this wetter climate is that some of the gravel which was water-deposited overlies Zone O, and it must have been deposited during a wet period. Further, the relatively poor preservation of vegetable materials in Zone O would speak for a slightly wetter climate than at present. The zone itself only covers a small patch in the back of the cave, roughly about 50 square feet.

Fig. - Extent of Zone O, Occupation I in the excavated area of Romero's Cave.

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Also there were two artifacts from down in the gravel in roughly the same position in square west ten and these have been included as being part of this occupation. In total this small stratum composes about sixteen cubic feet of refuse. The small size of the area plus the facts that the burnt rocks are from just a single hearth seems to indicate that the size of the group which laid down the strata was not much larger than a family, that is, a micro-band. Vegetable materials are extremely rare and only twenty specimens were found. There are no flowering fragments found, though there are a few wild pumpkin seeds. These pumpkin seeds suggest an occupation in the early part of the summer. The thinness of the strata plus the subsistence, which we will speak about in a moment, would seem to indicate that the family or micro-band that laid down the stratum only occupied the cave for a short time. Thus from the little evidence we have here they would seem to be nomadic.

There were thirty-two unidentifiable bones. All but one of these might very well be from a deer. The one exception is one that seems to be a bird leg bone. There were two bones that were identifiable and both of these are of the white-tailed deer. Many of the bones had been scraped, I believe, for marrow extraction. These materials would seem to indicate that the group did some hunting. Further confirmation of their hunting is the Abasolo point, Infernillo point, the fragment of an atlatl main shaft, and the thin side scraper. Thinking of the occupation as being by a family, one might suggest that the two deer killed might very well last them as much as a month of their occupation in this area. Their hunting diet, however, was supplemented somewhat by twenty wild plant specimens. Three of these wild specimens are from wild squash. Seeds from a feces may be from a very small

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variety of pumpkin, cucurbita pepo, which indicates a use of domesticated plants. The one humped scraping plane may very well have been used to pulp some of these wild vegetable materials, and this is a further indication of their food gathering activities. An estimate reveals that as far as subsistence activities are concerned, this group gained perhaps about sixty percent of subsistence by hunting, and about forty per cent by wild plant collecting, and less than one per cent from agriculture.

Other artifacts in this strata give us a glimpse of some of their cultural activities. One small fragment of a chequer-woven mat with an oblique corner indicates that they manufactured mats and perhaps were using sleeping mats. The other artifact is a small strand of cord made from Z-twisted hard fibre yarn to form an S-twisted cord. In terms of cultural relationship the Infernillo point and the chequered mat are diagnostic of the Infernillo phase which was found predominantly in Tm c 248. The humped scraping plane and Abasolo point also are common in this culture. The side scraper, the string and the atlatl fragment, however, are too general to make for any exact cultural connections.

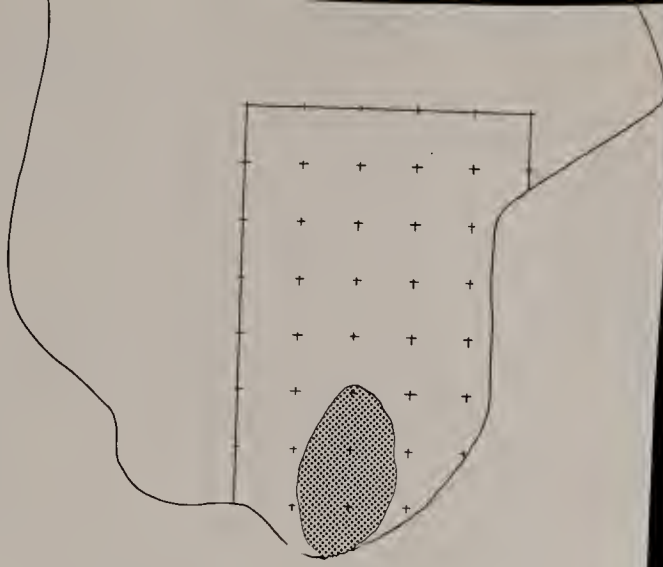
Overlying Zone 0 is ash and cave dust and a little gravel. There are no artifacts in this strata and it seems it is considered to be the upper part of Zone 0, sometimes called Zone 0-1, and this seems to be a time when the cave was not occupied. In terms of our Carbon 14 dates, this top part of Zone 0 without occupation probably represents a 2,000 year time period.

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Overlying Zone 0 is ash and cave dust and a little gravel. There are no artifacts in this strata and it seems it is considered to be the upper part of Zone 0, sometimes called Zone 0-1, and this seems to be a time when the cave was not occupied. In terms of our Carbon 14 dates, this top part of Zone 0 without occupation probably represents a 2,000 year time period.

acropora 2
level 1
zone 0



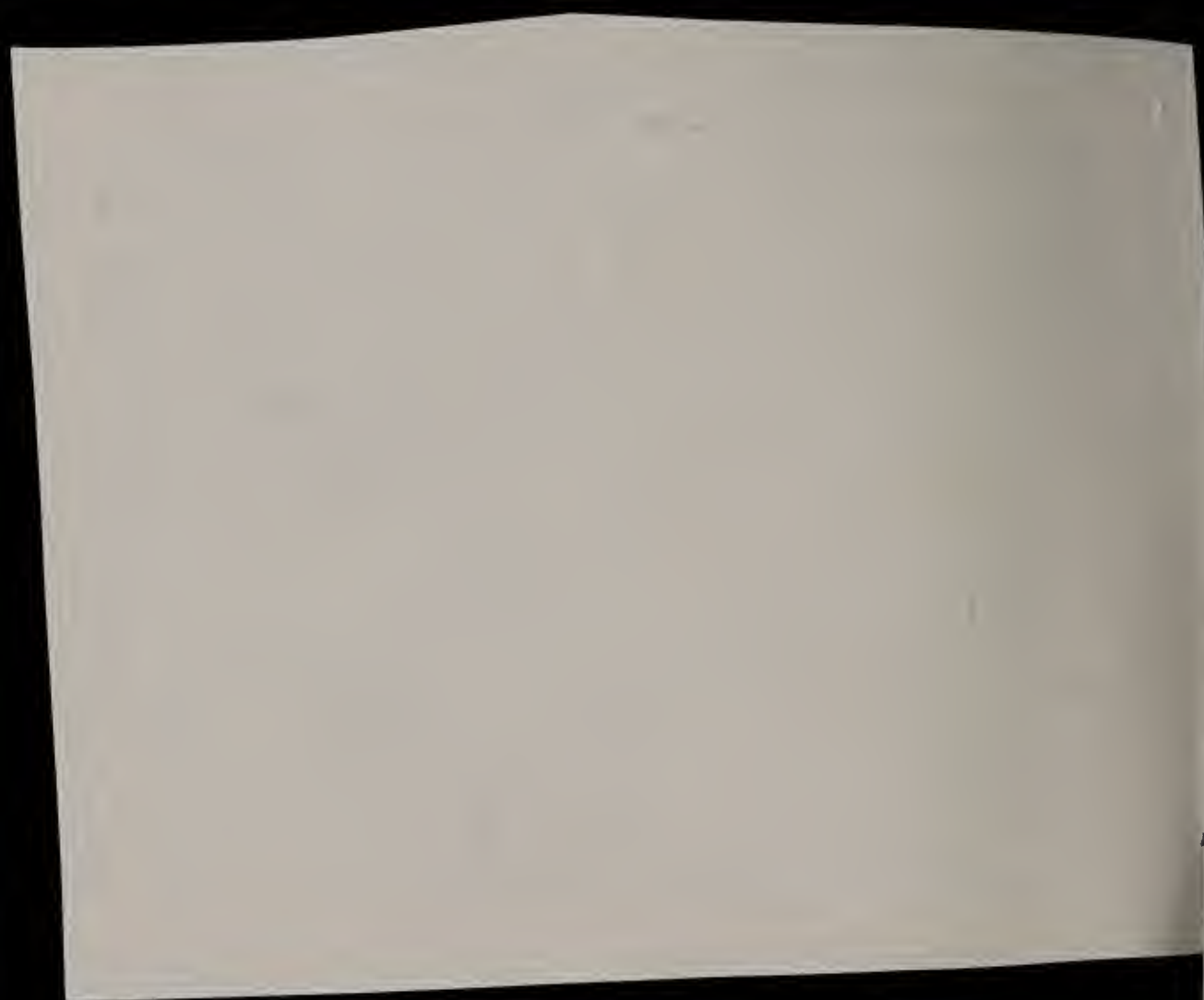


Fig. - Extent of Zone N, Occupation 2 in the excavated area of Romero's Cave.

Overlying the cave dust of Zone O-1 is Zone N. This is a thin charcoal stratum with some vegetable material in it. Some of the charcoal has been dated by Carbon 14 as being 3,244 B.C. \pm 200 years (M). We unfortunately have no good climatic data or pollen from this small thin stratum. The zone itself covered about 75 square feet and was usually only 2 inches thick. In total it had about 8 cubic feet of refuse. There were no features in it and no evidence of burnt rock. The small extent of the stratum seems to indicate that it was occupied by a micro band, that is, a group not very much larger than a family. The limited extent of the stratum and its relative thinness would seem to indicate that this again was a relatively temporary occupation. The squash seeds also indicate that this short occupation probably occurred in the late spring or early summer.

One identifiable deer bone and one identifiable rat bone and twenty split bones (broken for marrow), would indicate that these

Fig. - Extent of Zone A, Occupation 2 in the excavated area of Romero's Cave.

Overlying the cave dust of Zone 0-1 is Zone N. This is a thin
stratum with some vegetable material in it. Some of the
charcoal has been dated by Gordon as being 2,344 B.C. \pm 100 years
(17). We unfortunately have no good climatic data or pollen from
this small stratum. The soil itself covered about 25 square feet
and was usually only 2 inches thick. In total it had about 8 cubic feet
of refuse. There were no features in it and no evidence of burnt rock.
The small extent of the stratum seems to indicate that it was occupied
by a micro band, that is, a group not very much larger than a family.
The limited extent of the stratum and the relative thickness would
seem to indicate that this again was a relatively temporary occupation.
The charcoal seeds also indicate that this short occupation probably
occurred in the late spring or early summer.
One identifiable seed was found and one identifiable seed was not
found (split) (see below), which indicates that these

people did some hunting. The Abasolo and Tortugas projectile points and side scrapers may very well have been the implements used in the dealing with the chase. However, the greater bulk of food seems to have been wild plant material (20 specimens). There was one capsule of tripsicum grass and a pod of wild phaseolus cocconineus, that is runner beans. The mortar, the scraping planes and the saw-like chopper were probably implements used in preparing this wild food stuff for meals. The one squash stem seems to indicate that, while these people were basically food-gatherers, they did use domesticated plants in probably much the same manner as they used wild plants. An estimate of the subsistence of this occupation would seem to indicate that probably over sixty per cent of their food came from wild plants and perhaps thirty-five per cent came from hunting with a very small amount from domesticated plants. Other artifacts are relatively rare. One of the activities of this occupation seems to have been working leather. The side scraper and perhaps the scraping plane and an antler piercer all might have been tools used in preparing the skins. There also is a two-strand string, one piece being with Z-twisted yarn and a hard fibre, while the other being S-twisted yarn of a softer fibre. There is also a little fragment of a chequer-woven mat.

The Abasolo point, the small flake side scraper and the Z-twisted string and the chequer-woven mat all are quite similar to what was found in Occupation 1. However, Occupation 2 has a number of traits that definitely place it in the Ocampo phase and not in the earlier Infernillo phase. One of these is the Tortugas triangular point and another is the fragment of a mortar. Also, saw-like choppers and humped scraping planes are more common or as common with Ocampo as they are with Infernillo. The S-twisted yarn of string and the piercer are,

people did some hunting. The Aboos and Torgas projectile points and some weapons may very well have been the implements used in the dealing with the chase. However, the greater bulk of food seems to have been with plant material (20 specimens). There was one specimen of triploid grass and a lot of wild grasses, coconuts, but is runner beans. The mortar, the scriping plates and the saw-like chopper were probably implements used in preparing this wild food stuff for meals. The one which stem seems to indicate that, while these people were basically food-gatherers, they did use domesticated plants in probably much the same manner as they used wild plants. An estimate of the significance of this occupation would seem to indicate that probably over sixty per cent of their food came from wild plants and perhaps thirty-five per cent came from hunting with a very small amount from domesticated plants. Other artifacts are not heavily represented. The activities of this occupation seem to have been working leather. The hide scriper and perhaps the scriping plates and an antler; however, all might have been tools used in preparing the skins. There also is a two-strand string, one piece being with 2-twisted yarn and a hand fibre, while the other being 2-twisted yarn of a softer fibre. There is also a little fragment of a checker-woven mat.

The Aboos point, the small flake side scraper and the E-100 tool string and the checker-woven mat all are quite similar to what was found in Occupation 1. However, Occupation 2 has a number of points that definitely place it in the Camp phase and not in the earlier Intermittent phase. One of these is the Torgas triangular point and another is the fragment of a mortar. Also, some of the choppers and tapered scriping blades are more common or as common with Camp as they are with Intermittent. The 2-twisted yarn of string and the fibres are





of course, very general traits and could belong to any of the latter phases.

Overlying Zone N is another layer of ash and dust material that is called Zone N-1. It seems to represent a period when the cave was not occupied.

Fig. - Extent of Zone M, Occupation 3 in the excavated area of Romero's Cave.

Next comes a thin 1-inch thick stratum which covers a small portion in the back of the cave which was composed of well-preserved vegetable material with a little charcoal in it. This Occupation 3 of Zone M made up about twenty-one cubic feet of refuse. About one fifth of this refuse came from two pits, one was a small roasting pit, that is, a pit filled with burnt rock and charcoal, while the other pit was a little bit larger and was crammed with leaves of Huapillas. The single fireplace and the extent of the refuse would seem to indicate that a single family or a micro band laid down the stratum. The thinness of the layer would again indicate a relatively brief occupation, though perhaps a little longer than the previous two. A single flower of cactus plus beans and squash might indicate that this occupation occurred during the late spring, perhaps during the

of course, very small, but it could be seen in the latter
places.

Overlying Zone M is another layer of soil and that is called the
is called Zone N-1. It seems to be a soil which the cave was
not occupied.

Fig. - Section of Zone M, Occupied in 1911 in the
excavated area of Hooto's Cave.

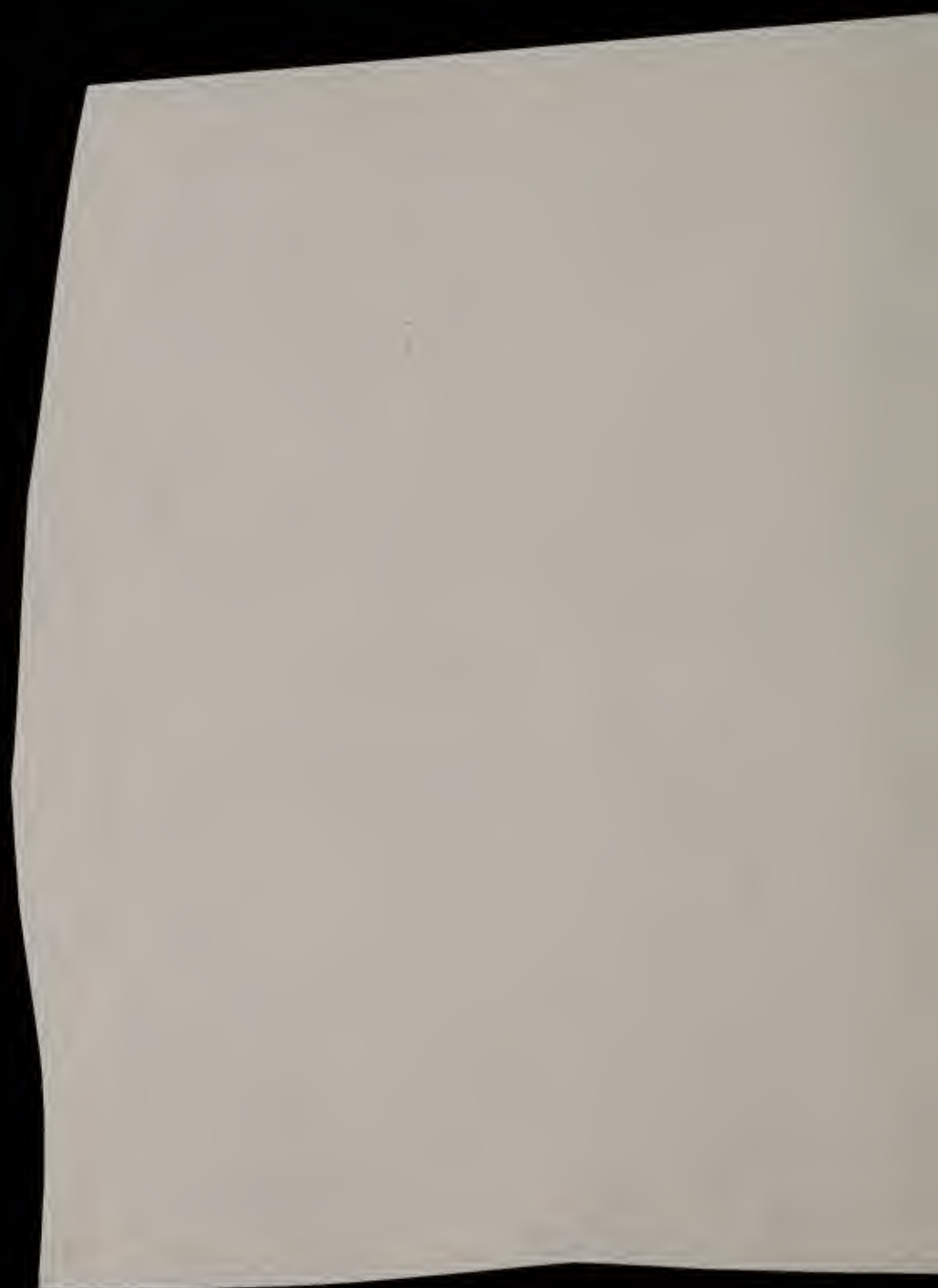
Next comes a thin 1-inch thick stratum which covers a small
portion in the back of the cave which was composed of well-preserved
vegetable material with a little of coal in it. This Occupied in 1911
of Zone M made up about twenty-one cubic feet of refuse. About one
fifth of this refuse came from two pits, one was a small wooden
pit, that is, a pit filled with burnt rock and charcoal, while the
other pit was a little bit larger and was crammed with bones of
Hapillan. The single thickness and the extent of the refuse would
seem to indicate that a single family or a small band lived in the
stratum. The thickness of the layer would again indicate a very
brief occupation, though perhaps a little longer than the previous two.
A single flower of a species of bean and squash also indicate that
this occupation occurred during the late period, before the

months of April and May. Our estimates of subsistence would seem to show that slightly less than forty per cent of their food came from hunted material, half from plant collecting and the remainder from agriculture. The single fragment of deer skin, a piece of a bone of a skunk and bone of a bird, as well as thirty-four split bones were evidence for hunting. There are however a number of tools that also can be connected with the chase. These include Abasolo, Tortugas and Abasolo points, a flat end atlatl foreshaft, side scrapers both of the thick and thin variety, a pebble chopper, a discoidal scraper, and an elongate end scraper. All of these could somehow be connected with preparing animal remains. About as important as these remains are hundred-and-thirty plant specimens. Among these plant specimens are tripsicum grass and runner beans, as well as remains of a gourd represented by ten rind fragments, a pepper remain, and a number of seeds of squash, as well as two pods of common beans of the yellow-seeded variety. The flat and humped scraping planes and the saw-like chopper may have been used to make these vegetable remains into a palatable dish.

One of the activities of this group while it occupied the cave seemed to have been the making of hunting tools. The gouge may very well have been used to work wood for making the atlatl foreshaft, which - I might add - is not quite finished. It also could be used for making the pointed wooden stick and for making the hammered split and conical wedges. Another activity seems to have been working skin; the small piece of deer skin is obviously an indication of this. Split and conical wedges may have been used to peg down the skin while it was being scraped, while the discoidal scrapers and side scrapers and perhaps the scraping plane may have been used in fleshing the skin. They ~~all~~ ~~awl~~ may have been used ~~as awl~~ for piercing the hide. There was a single



4
49



fragment of twilled mat which may have been, of course, a sleeping mat and both the awl and the pointed stick may have been used in making this mat. Again, there are a number of pieces of string.

As far as cultural connections are concerned, the Z-twisted hard yarn string, the scraping plane, the atlatl, the awl and the chopper and the thin side scrapers seem to be a continuity from the earlier horizons. None of them are particularly diagnostic artifacts. The Abasolo, Nogales and Tortugas points, however, are definite Ocampo artifacts. Twilled mats, discoidal scrapers and gouges are also common in these horizons. Other more general traits are the pointed stick, the wedges and the pebble choppers and the elongate scrapers. These, of course, are not unlike other Ocampo remains.

Overlying the lower vegetable material of Zone M was a brown gray soil. There also was a considerable amount of charcoal in this zone which was called Zone M-1. Originally it was thought to be an occupation level, was excavated and called Level 9. However, when it came time to analyze these materials, no artifacts were found in it and there were some indications of intrusions of vegetable materials from the zone immediately above it, Zone L. Thus I would believe that Zone M-1 again is a time when there was no occupation in the cave. However, it would seem that there was probably a relatively small amount of time between Zone M, Occupation 3, and Zone L, Occupation 4.

fragment of twisted net which may have been, of course, a sleeping
net and both the net and the pointed stick may have been used in
making this net. Again, there are a number of pieces of stick.

As far as additional connections are concerned, the 2-twisted band
form, the horizontal plane, the shell, the net and the pointed
stick and the thin side supports seem to be a continuity from the earlier
horizons. None of them are particularly distinctive artifacts. The
A-sols, fagots and fagot points, however, are distinctive. Campo
artifacts, twisted mats, discoidal supports and fagots are also common
in these horizons. Other more general traits are the pointed stick,
the wedge and the fagot supports and the elongate supports. These,
of course, are not unlike other Campo remains.

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some indications of intrusions of vegetable material from the zone
immediately above it, Zone II. Thus I would believe that Zone M-1 again
is a time when there was no occupation in the cave. However, it would
seem that there was probably a relatively small amount of time between
Zone M, Occupation 3, and Zone I, Occupation 4.

The next area or zone in the cave was called Zone L and in it was found Occupation 4. This stratum is of brown vegetable material. It varies between two and four inches in thickness. Within the excavated area it covered about nine 5-foot squares, but there was considerable evidence that to the west where we did not excavate it was more extensive. On the basis of this I would guess that there are at least sixty cubic feet of refuse in this stratum. Extending down from this stratum was one pit (26) with fired rock in it. And there also was one rather shallow irregular pit which had quite a bit of wild plant material stored in it. Looking at the extent of the refuse one might guess that it had been occupied and laid down by perhaps a family or two, in other words, something somewhat between a micro-band and a macro-band, but still more of the micro size than of the larger size. There is some evidence that it was occupied for a slightly longer time period than our previous horizons. In the refuse were some flowers which would have been picked in the spring but there also were nuts, which would be fall picking, as well as peppers, corn, bean, and so forth, that I would guess it was probably ^{harvested} in the summer. Thus I would believe that this occupation was probably by a fairly small group but that it was seasonal, perhaps running from sometime in the spring to sometime in the fall.

As far as the actual subsistence is concerned, there were eighty bone fragments. Most of these were unidentifiable and had been split for their marrow. There were, however, two deer bones and a fragment of deer skin and also a tooth of what seems to have been a dog. There also is one bone of a Cocomixtla. Beside these few bones there were other evidences of hunting. There was an Abasolo point, and then wrapped in a leaf in the back of the cave were three Tortugas points, two of them attached to atlatl foreshafts and one attached to a lance shaft.

The next area or zone in the cave was called Zone I and in it was found Occupation 4. This stratum is of brown vegetable material. It varies between two and four inches in thickness. Within the excavated area it covered about nine 5-foot squares, but there was considerable evidence that to the west where we did not excavate it was more extensive. On the basis of this I would guess that there are at least sixty cubic feet of refuse in this stratum. Extending down from this stratum was one pit (26) with fired rock in it. And there also was one rather shallow irregular pit which had quite a bit of wild plant material stored in it. Looking at the extent of the refuse one might guess that it had been occupied and laid down by perhaps a family or two, in other words, something somewhat between a micro-band and a macro-band, but still more of the micro size than of the larger size. There is some evidence that it was occupied for a slightly longer time period than our previous horizons. In the refuse were some flowers which would have been picked in the spring but there also were nuts, which would be fall picking, as well as peppers, corn, beans, and squash, that I would guess it was probably in the summer. This I would believe that this occupation was probably by a fairly small group but that it was seasonal, perhaps running from sometime in the spring to sometime in the fall. As far as the actual subsistence is concerned, there were eighty bone fragments. Most of these were unidentifiable and had been split for their marrow. There were, however, two deer bones and a fragment of deer skin and also a tooth of what seems to have been a dog. There also is one bone of a Cocomixtla. Beside these few bones there were other evidences of hunting. There was an Abasco point, and then winged in a leaf in the back of the cave were three Tortugas points, two of them attached to atlatl foreshafts and one attached to a lance shaft.

Beside these obviously hunting implements there also were a number of scrapers which might be connected with the curing of animal skins which were taken in the chase. However, the predominant material was wild plant food stuff. There were 408 plant remains. Among these plant remains were some grains of *tripsicum* as well as some of *panicum*. There also were a number of implements that could be connected with collecting and preparing plant remains. The net and the basket, both upen types, more or less like sieves, certainly could have been used to bring in plant materials to the cave as well as sifting the plant materials for seeds. The sawed chopper and the scraping plane also could have been used for preparing these food remains. Somewhat different from our previous remains are quite a variety of agricultural plants though they are rather limited in number. These people certainly were doing some sort of limited incipient agriculture. There are fragments of gourd rind, a squash stem, and in the feces there were definite evidences of bean tissue and bean pod, probably indicating that the beans were ^{green}. There also were in the feces a couple of chili pepper seeds and a number of pieces of corn silk with the pollen still adhering. It is most peculiar that nowhere in the actual layer did we find any whole corn cobs. One cannot help but wonder if they were not planting corn but rather collecting some sort of wild corn which they eat green, probably chewing the cob and sucking out the juice and nutrition and then spitting out the remains outside the cave. In such a process some of the pollen and some of the corn silk, of course, might have gotten swallowed outside but defecated inside. An estimate of these remains would probably indicate that about eighty per cent of their diet was from wild plants, about ten per cent from hunting, and perhaps another ten per cent from a ^{wide} variety of domesticated plant species. Some of the sticks from these vegetable materials were

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of these remains would probably indicate that about eighty per cent
of their diet was from wild plants, about ten per cent from hunting,
and perhaps another ten per cent from a variety of domesticated plant
species. Some of the sticks from these vegetable materials were

analyzed for Carbon 14 and revealed the date of 2,604 B.C. \pm 200 years. Also, some of the dust of the pollen was analyzed and revealed that these people were probably living in the area when it was as dry or perhaps a little drier than it is at the present time.

Now as to the other cultural activities of our fourth occupation. One activity seems to have been the chipping of stone artifacts. There is an antler hammer and there were many more flint chips in Zone L than there had been in any of the previous horizons. I suspect that the Abasolo and Tortugas points found were made during this occupation. In fact, the three Tortugas points with the foreshafts, neatly wrapped in a leaf, might ~~be~~ showing that a workman had just finished making these and set them aside to be used later. Beside this activity of chipping flint they seem also to have been working skins. There was one piece of deer skin which had been scraped on one surface, while hair was adhering on the other. The thick and thin side-scrapers may have been used for slicing and initial scraping of skin; the elongate end scraper and the disk scraper could have been used to take off the fats tissue from the skin. Another activity which these people may have done during their long seasonal occupation was making wood tools. A fragment of a gouge may have been their working implement. The atlatl foreshaft and lance, the pointed sticks and the wedges all could have been made with this tool. Still a further activity of the occupants of the cave was weaving. A number of different kinds of cords were made. Two of these cords were made with Z-twisted hard fibre yarn. One was composed of cord made of two yarns, while a second was composed of four yarns. There also were some cords made of softer fibres. The yarns were S-twisted and the cord itself was made from two yarns which, of course, was twisted in a Z direction.

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Many of these cords had been tied into knots, the commonest being the simple over-hand knot, but almost as numerous were square knots. Whether these strings were to tie or bind objects or parts of traps is difficult to say from our slim evidence. Somewhat more complex than the making of strings was the making of nets and a basket. The pointed stick of wood may have been the implement used in pushing the fibres through the coiled elements in making the basket. The basket again is of the sifter-type with quite large spaces between the coils. The coils are of a bundle foundation and the element tying them together are what I have called loop and twist variety. The net is also of the loop and twist or full-turned coil type of net. A piece of twilled mat occurred that also might have been part of a basket.

Now as to cultural relations. There are still some resemblances to our earlier Infernillo horizon but they are of a most general nature and include the Abasolo point, the scraping plane and the Z-twisted yarn. All these traits seem to carry on into Ocampo times. Definite Ocampo traits are the Tortugas points, the disk scrapers and the sawed choppers, the gouge and the loop and twist net and loop and twist basket with a bundle foundation, and the twilled basket. Most of the other traits are of a fairly general nature and could belong to any of a number of cultural phases. Zone L is perhaps our best example in the Romero's Cave of a component of the Ocampo phase. As we shall see the occupation of the Ocampo phase in this cave is not quite so extensive as in the adjacent cave. Beside the obvious cultural and agricultural differences between the earlier Infernillo culture and Ocampo, this stratum brings out a number of significant other differences, one is that the Ocampo remains seem to have been during a dry climatic period while Infernillo ones had been in a

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of a basket.

net. A piece of twilled net occurred that also might have been part

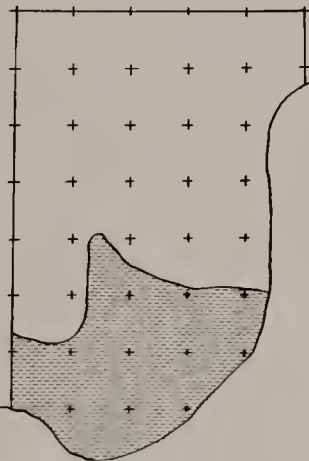
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basket again is of the sifter-type with quite large spaces between

the fibres through the coiled elements in making the basket. The



See 5

Nov 7

Page 10

somewhat wetter time period. Secondly, there seems to have been a considerable shift in the subsistence pattern with the Ocampo people, dependant mainly on wild plant material with about as much incipient agricultural remains of domesticated plants as they obtained from hunting. This is in contrast to Infernillo which had about as much wild plant collecting as hunting and an extremely small amount of domesticated plants.

Fig. - Extent of Zone K, Occupation 5 in the excavated area of Romero's Cave.

Lying immediately on top of the vegetable stratum of Zone L was a grey ash layer (Zone K) with a very few pieces of vegetable material in it. This seems to be an actual occupation area, called Occupation 5. As we shall see, it has many cultural differences from that of previous horizons. It occupies very much the same area in the excavated portion of the cave that Zone L did. However, there is one difference; Zone L seems to have been expanding into the unexcavated area, while Zone K is definitely diminished. Thus ~~the actual truth~~ is a much smaller area of occupation and in total number of estimated cubic feet much less. It is estimated as having had 22 cubic feet of refuse. I

...with the ... , ... , ...
...in the ... with the ...
...with the ...
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Fig. - ... of ... in the ...
... area of ...

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... (Zone N) with a ...
... in the ...
... it has ...
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would estimate that this was probably only a family or a micro-band occupation. While the layer gets as thick as three inches in certain places, it is nowhere as clear or as well defined as Zone L, and the vegetable material would seem to suggest that it is less than one season, probably the cool part of the summer. The subsistence seems to be very much different. No bone material was found whatsoever. However, there were a number of artifacts that could be connected with hunting: Abasolo point, Catan and Matamores points, rabbit sticks and atlatl foreshafts and mainshafts, a barbed wooden atlatl foreshaft as well as thick and thin scrapers. All would seem to be connected with game. However, there is a possibility that they also could be connected with warfare or be connected with the making of hunting implements for hunting at another season when they are no longer occupying the cave. Wild plant remains, 143 of them, are relatively rare. There is some wild squash seeds and rinds, and there are a few implements that would seem to indicate food collecting: the thick and thin chopper, the flat scraping planes, the net and the basket. Almost as important as the wild plant material, and certainly as important as the evidence of hunting, was the wide variety of agricultural remains. Here we have not only squash seeds, rinds and stems, but also an actual corn leaf and a gourd container. While none of these plant remains are very numerous there does seem to have been a shift with a good deal less hunting which seems to have been somewhat replaced by agricultural remains. Other artifact material besides the ones mentioned previously seem to have been fairly rare and for the most part seem to be connected with weaving. There is some Z-twisted yarn and some S-twisted yarn cord, a single simple loop net bag, and a split-stitch basket. A small pointed stick which might have been used in weaving these baskets occurred.

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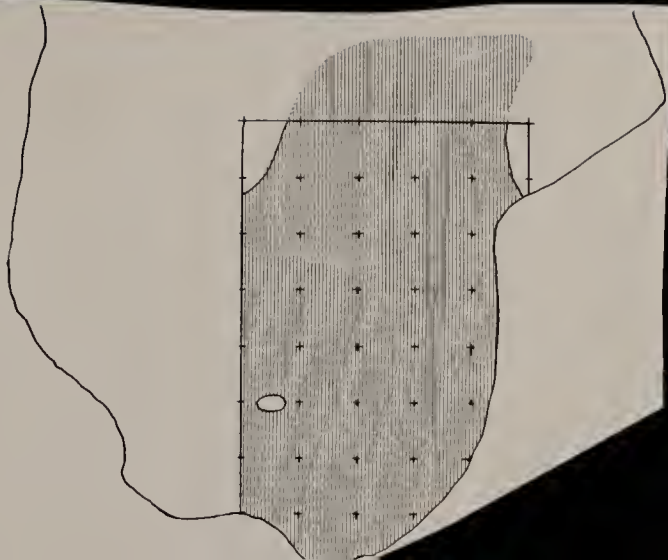
atlatl foreshafts and mainshafts, a barbed wooden atlatl foreshaft

hunting: Abasco point, Catán and Matamoros points, rabbit sticks

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to be very much different. No bone material was found whatsoever.

area 6
line 6
row 5





While many of the artifacts of Zone K are like those found in the previous horizons, the Catan and Matamores points, the rabbit sticks and the barbed point seem to indicate that we are dealing with a new cultural type, which I am calling the Guerra phase.

Fig. - Extent of Zone J, Occupation 6 in the excavated area of Romero's Cave.

Overlying the grey ash was a distinctive clearly defined zone, called Zone J, Occupation 6. In the front of the cave it was reddish brown in colour, while in the back it is pure brown vegetable material. In fact this was one which was encountered in the initial part of our excavation and which we followed all the way through, and it often acted as a sort of datum plane in defining our layers to be excavated and also in numbering and renumbering our excavation levels. From the dust of this extensive zone of vegetable material we obtained a pollen sample. This pollen sample would seem to indicate that the climate during this time period was wetter than it is at present and perhaps as wet as during the initial Infernillo occupation. A few sticks were also taken from this vegetable layer for a Carbon 14 date. This Carbon 14 date of roughly 2,700 B.C. seems to have been contaminated. I cannot help but believe that some of the sticks sent

274, 5	5	5 1 1	1	3	2
47, 11	2 1	2 1	3 4	7	1
47, 11	6 15	6 4	19 15	8	11
	11 11	3	11 11		
47	5	2	5 1 3		
47	2	1	1 1		
47, 8	4 7	5	8 5		
47, 7	6	6	6 6	1	
47, 6	1 8	6	9 5		
47, 5	4	2	9 3		

274, 13	2 1 1 1 1				
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274, 7					
248, 3	1	3			
274	1				
	3	2 2 1 1 1			
274, 25	5	1 2 1 1			
	29	1 9 8 3 3 1			
	1	9 5 1			
	1	6 1			
		1			
274, 14	1	6			
274, 15	1				
	3	17 1 2			
248, 46 (3)					
247, 212 (1)					
248, 47 (4)	1	1 3			
248, 48 (1)	1				
274, 412 (1)	1	1 1			

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Fifty-three unidentifiable bone fragments were found and a couple of these seem to be a deer. One identifiable bone is from an actual deer. Implements that seem to be connected with hunting are Abasolo, Catan, and Matamores projectile points, an atlatl mainshaft, an atlatl foreshaft. Other implements such as the disk scraper, the antler piercer and the elongate scraper may have been used also for working on hunted material. However, much more numerous than the bones were the 242 plant remains, including wild squash, amaranths, tripsicum grass, wild runner beans. The muller and the saw-like chopper seem to have been materials that were used in preparation for these wild food stuffs. There are considerably wider varieties of domesticated plants. These included gourds, squash seeds of both cucurbita pepo and cucurbita moschata. There are also bean remains from these materials. There are also four corn cobs. A long, relatively pointed stick with a pounded end might very well have been the implement used for making holes in the ground in which to drop the kernels of corn during planting. The only other activity that we have evidence of is that of weaving and these are but two strands of two-yarn cord of

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Z-twisted hard fibre yarn. As far as cultural relationships are concerned, the Catan, Abasolo and Matamores points and the muller as well as the agricultural plant remains would seem to show that we are dealing with a component of the Guerra phase. Again, ~~the~~ number of scraper types and the Abasolo points and the saw-like chopper seem to be hold-overs from an earlier horizon.

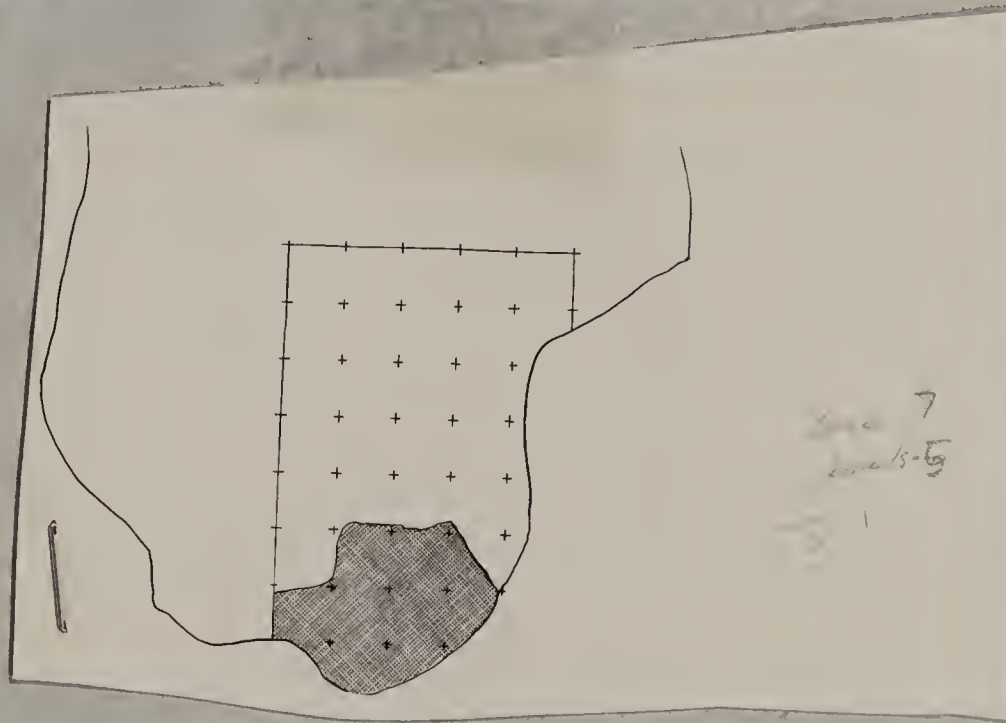


Fig. - Extent of Zone J-1, Occupation 7 in the excavated area of Romero's Cave.

In most parts of our excavation this more distinct Zone J gradually became more yellow brown in colour, or more like terra rosa colour in the next layer above. This, however, in spite of its connections with the earlier parts seems to be a separate occupation which we are calling Occupation 7. The reason I say this is, that in the extreme back wall of the cave there was an actual thin strip of cave dust separating this yellow-brown ash from the lower reddish-brown ash. The terra rosa soils in this layer would certainly indicate a much wetter climatic period. The stratum itself is relatively small and extremely thin; it composes only about 68 cubic feet in the whole cave. On the basis of this limited material I would guess we are dealing with a small group who occupied the cave for a single season.

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Fig. - Extent of Zone 1-1, Occupation 7 in the excavated area of Romero's Cave.

In most parts of our excavation this more distinct Zone 1 gradually became more yellow brown in colour, or more like terra rosa colour in the next layer above. This, however, in spite of its connections with the earlier parts seems to be a separate occupation which we are calling Occupation 7. The reason I say this is, that in the extreme back wall of the cave there was an actual thin strip of cave dust separating this yellow-brown ash from the lower reddish-brown ash. The terra rosa soils in this layer would certainly indicate a much wetter climatic period. The stratum itself is relatively small and extremely thin; it composes only about 68 cubic feet in the whole cave. On the basis of this limited material I would guess we are dealing with a small group who occupied the cave for a single season.

There are fifty-two unidentifiable bones and almost all of these are split. Some of the unsplit ones, however, seem to come from birds. The rest of the fragments are too small to ^{identify} ~~say what animal~~. An Abasolo point, Matamores and Catan points and a disk scraper also seem to have been connected with the chase. 262 wild plant remains occurred as well as a chopper and a scraping plane that could have been used in preparing these wild plant remains. Again, there are indications that agriculture was certainly as important as hunting. We had both gourd and pumpkin remains, we have corn cobs, and we have definite evidence of the common kidney bean. There also was a ball of string which is S-twisted (and probably hand-twisted rather than spindle whorl twisted) cotton string. This indicated still another domesticated plant that these people had. The only other activity besides subsistence indicated in the cave is again the making of string. Besides the actual cotton string there are two cords of soft S-twisted yarn. The Abasolo, Catan and Matamores points as well as the food stuffs indicate that we are dealing with a component of the Guerra phase.

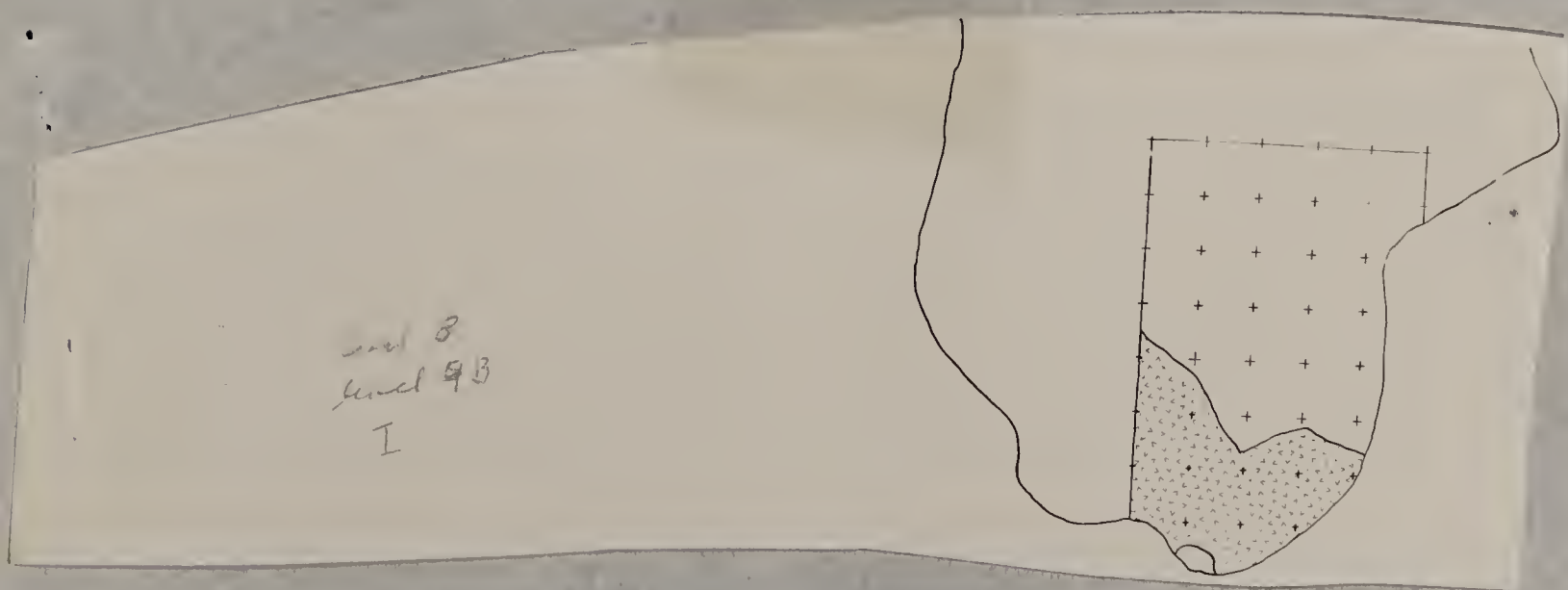


Fig. - Extent of Zone I, Occupation 8 in the excavated area of Romero's Cave.

There are fifty-two unidentified bones and almost all of these are split. Some of the unsplit ones, however, seem to come from birds. The rest of the fragments are too small to say ~~definitely~~. An Abasco point, Matamoras and Catán points and a disk scraper also seem to have been connected with the phase. S&S wild plant remains occurred as well as a chopper and a scraping plane that could have been used in preparing these wild plant remains. Again, there are indications that agriculture was certainly as important as hunting. We had both gourd and pumpkin remains, we have corn cobs, and we have definite evidence of the common kidney bean. There also was a ball of string which is 2-twisted (and probably hand-twisted rather than spindle whorl twisted) cotton string. This indicated still another domesticated plant that these people had. The only other activity besides subsistence indicated in the cave is again the making of string. Besides the actual cotton string there are two cords of soft 2-twisted yarn. The Abasco, Catán and Matamoras points as well as the food stuffs indicate that we are dealing with a component of the Guerra phase.

Directly over the yellow ash zone is Zone I, Occupation 8. This is a relatively thick layer of pure vegetable material. Pollen and plants from this stratum have been studied and reveal that we are dealing with people who lived here during a wet period. As far as the stratum is concerned it is located mainly in the back of the cave. It however seems to be expanding and probably was larger in the unexcavated part of the cave than in the area we dug. An estimate of the number of cubic feet of this relatively thick layer of refuse is that it had about 200 cubic feet. Within the stratum were three hearths and right back against the far walls of the cave was a burial pit. In terms of the size of the area occupied it would seem that we are dealing with a macro band; the three hearths would mean at least three families and it might have been as many as six families. The large amount of vegetable material with the corn and the bean and squash may very well mean that we are dealing with a people who were here during a harvesting season and probably were here the whole next season. Thus Occupation 8 is a seasonal occupation by a macro band.

In terms of subsistence, seventeen unidentifiable fragments of bone were found and one of these seems to be the leg of a bird bone. Mixed in with the tremendous amount of vegetable material were a number of implements that might be connected with the hunt, these include the Catan and Matamores points, a wooden dark blunt, an atlatl mainshaft, as well as discoidal and flake scrapers that might have been used for skinning. Wild plant material number 360 specimens; included in these are a number of huapillas leaves, opuntia leaves, panicum, tripsicum, ^{for} ~~manib~~ and amaranth. Implements that might have been used to prepare these wild plants are the choppers. These plant materials might have been collected in the various baskets and nets

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we found with the refuse. These wild food materials represent between 50 and 70 per cent of the total food stuff for the layer. The final subsistence activities seem to be agriculture. These materials represent from perhaps 20 to 30 per cent of the diet of the people of this layer and this activity seems to have been more important than hunting. Included in the agricultural stuff are 250 corn cobs, some bean fragments, some pumpkin fragments, some cotton, some gourd fragments as well as a whole gourd container and a single possible seed of teocentli.

Besides tools concerned with their subsistence pattern, we have some proof of other activities. The flake and discoidal scrapers indicate that skins were being prepared during the occupation, and a single fragment of a leather sandal or huarache seems to be one item of skin that they had manufactured. Perhaps the most numerous activity we have evidence of is weaving. With the associated burials and in the stratum itself there was a great deal of string. Much of the string is Z-twisted hard fibre yarn which has been made into four-yarn cord. There ~~are~~ ^{are} three S-twisted hard yarn cords, four S-twisted hard yarn cords and some simple cotton strings. None of this cotton string seems to have been made by use of a spindle whorl. Some of this string had been used to make net bags. There is a twisted loop bag, a knotless twisted net bag, and a simple loop bag. There also is a twined (basket-maker-like) blanket with a black geometric design woven into it. This may have been made on a belt loom. There also is a plain woven chunk of cotton cloth. Besides these woven objects there are a number of baskets most of them are of the coiled type. Most numerous are split-stitch bundle foundation baskets, either in the form of large pans or in the form of bowls. There are also two ~~more~~

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distinctive sifter-type bags with interlocking twisted stitch. The final items of weaving are the mats; most of these are twilled and are distinctive in having special types of selvages. They also have either square or rounded corners and these lateral borders either are made by overlapping double strands or by one over one, or two over two strands diagonally bent edges.

Equally distinctive of this Guerra horizon are its burials. All three bodies were placed in one large shallow pit, 3 feet by 4 feet, at the back wall of the cave, literally in a small cave in the big cave. First the pit had been lined with palm leaves. Next a young adult male had been laid in the pit on his left side with head to the southwest. He was in a semi-flexed position with his left hand flexed lightly against his body so his hand was under his face while his right upper arm was at an acute angle from his body and his right forearm extended away from the body as it was at a right angle to the upper arm. In his pubic region there was a mass of string (perhaps a fringed apron) and some of this string passed around his back (perhaps a belt for the apron). His upper legs were at slightly more than a right angle to his body and pointed slightly downward, while his lower legs were parallel to his body being at slightly more than right angle to the upper portions. The second skeleton, a young adult female, had her tightly flexed legs wrapped in a twined blanket, a loop-twist loop net bag placed in her pubic region and the blanket, bag, and flexed legs tied with rope. Then she was placed in a slightly deeper position of the pit on her right side facing the first burial and head to the southeast. Her right arm was flexed against her chest while her left one touched the male burial's chest. Also, the right hand and forearm of the male burial had been laid over her

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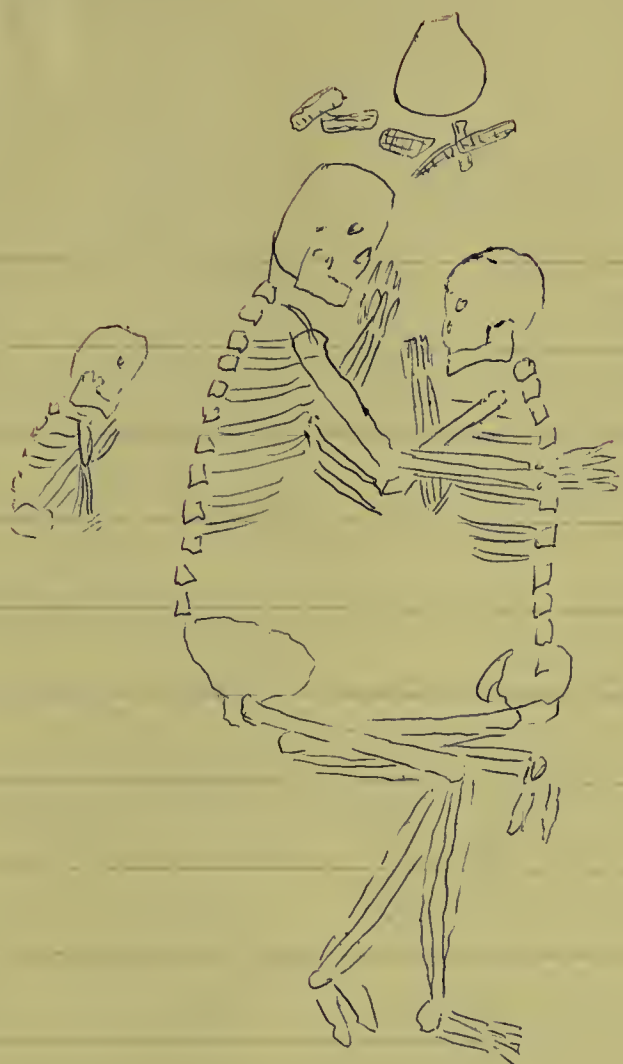
left arm and side. Her flexed bound and wrapped legs were at right angles to her body and they extended between the legs of the male so that the knees rested against the back part of his illium. The final burial, a child, had been placed in the pit in back of the male. The child, very young (less than 12 months) had been placed in a tightly flexed position on a large twilled mat. Two small baskets, one inside the other, and a net were placed in his lap while two slightly larger decorated bowl baskets were placed on his head. Then a large rectangular mat was wrapped around his body so that it ended in its back region. Then another mat was placed around the head and around the first mat. Finally, a smaller mat was wrapped around the body so that it ended near the front of the body. Next, various strands of string were tied together to make a long rope and in some cases three or four cords were laid parallel and tied to strengthen the rope. Then this burial bundle was laid roughly in the middle of the length of rope. The rope was then wrapped around once and when the portion twisted they were turned 90° degrees and wrapped around in the opposite direction. This process continued until there were seven loops around the body and six up and down the body. The ends were then tied and a small braided simple woven tumpline attached to the whole bundle. It was then laid in the pit on its left side, the head to the southeast facing the back of the adult male. Next a water bottle made from a gourd, an atlatl mainshaft and Bat Cave corn were placed southeast of the man's head and then the male and female and a small portion of the child covered by two rectangular twilled mats. After this a large pan-shaped split-stitch bundle-foundation basket was placed over the mat over the pelvis of the male and the knees of the female and another over the child and part of the mat over the male's back. Finally, the pit and burials were covered.

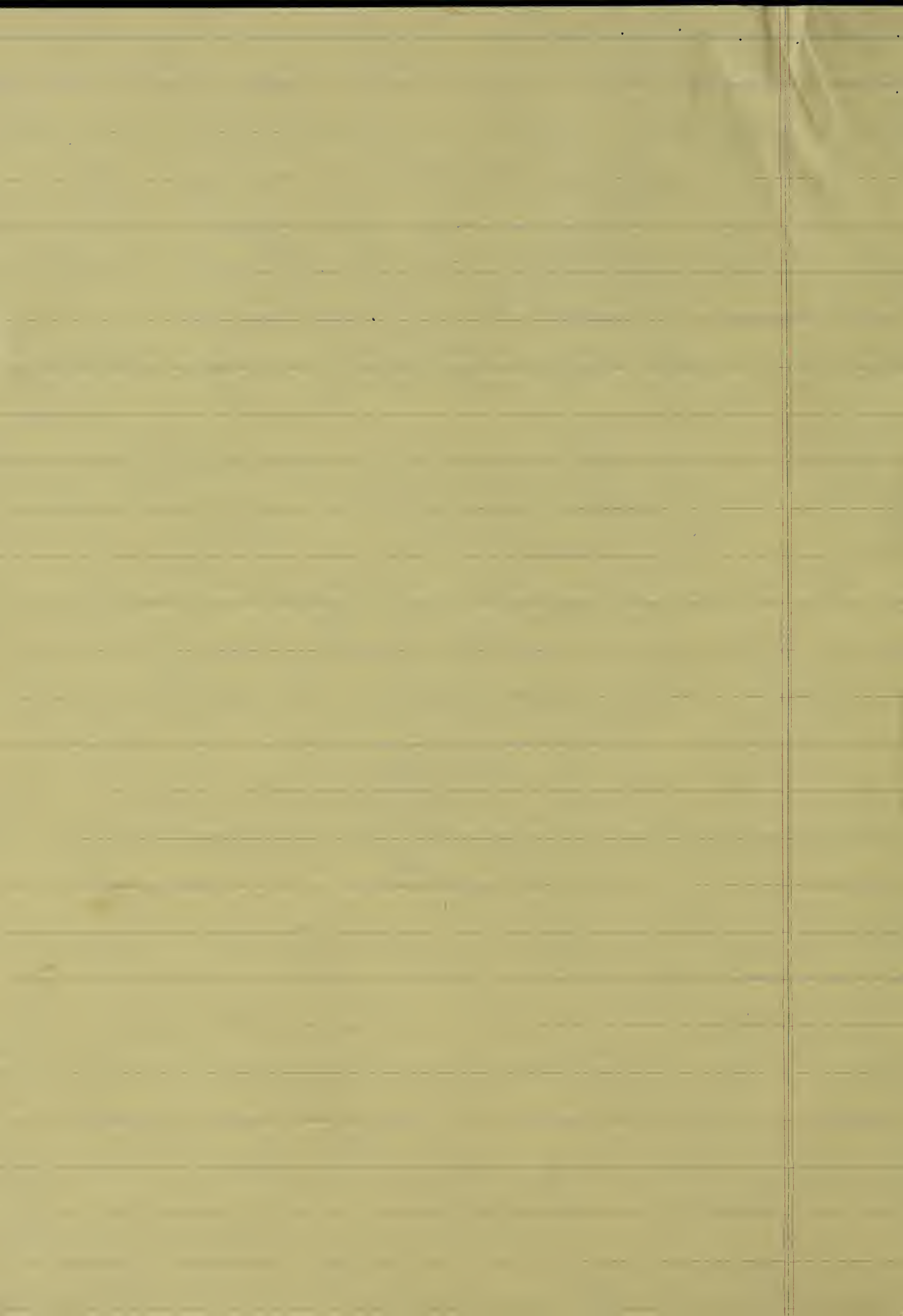
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Fig. - Burial

~~Plates (?)~~





Plates -

Before passing on to the other occupation descriptions it seems fitting and proper to pause a moment and consider the implications of this multiple burial. The first question that comes to mind is, where did they die? The tumpline on the child bundle burial and the partially wrapped female burial makes one suspect that death was met not in the cave but outside it, and the dead were carried into the cave and buried. What is the relationship of the three? The trio, a young male and female and a very young child seem most likely to have been a family group. (It is hoped that eventually blood-type studies of these burials will check this hypothesis).

What is the reason that this family (?) died together and why were the male and female buried in positions that strongly suggest coital or other intimate relationship, that is, the arms in fondling position, the female's legs thrust between the male's legs and thrust against his privates(?). Three explanations seem possible. One is that the family (?) died of disease (and the feces from the same level indicate that diseases such as ameobic dysentery were prevalent and that their living quarters were not very sanitary). The position may have been due to the sexual attitudes of Guerra people who might have thought that some sort of intimacy or fondness should be carried on not only in this life but into the next. Another explanation is a more melodramatic one. This is that the male and female had incestuously or adulterously given birth to a child and that the mores of the Guerra society were such that when they were caught they had been executed and buried in a manner simulating their crime. The final explanation is that this is some sort of human sacrifice. I feel the first explanation is the most likely.

Distinctive traits of this component Occupation 8 of the Guerra phase are the Catan and Matamores points, the split-stitch baskets of

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both the pan and the bowl type - the latter of which is decorated, the Bat Cave corn, the twisted stitch bundle foundation baskets, the twined basket-mat-like blanket, the simple bags and the woven mats with rather distinctive types of edges. There are of course string types and some general scraper types that seem to hold over from earlier horizons. As we shall see, this Guerra horizon has much in common with the following phase.

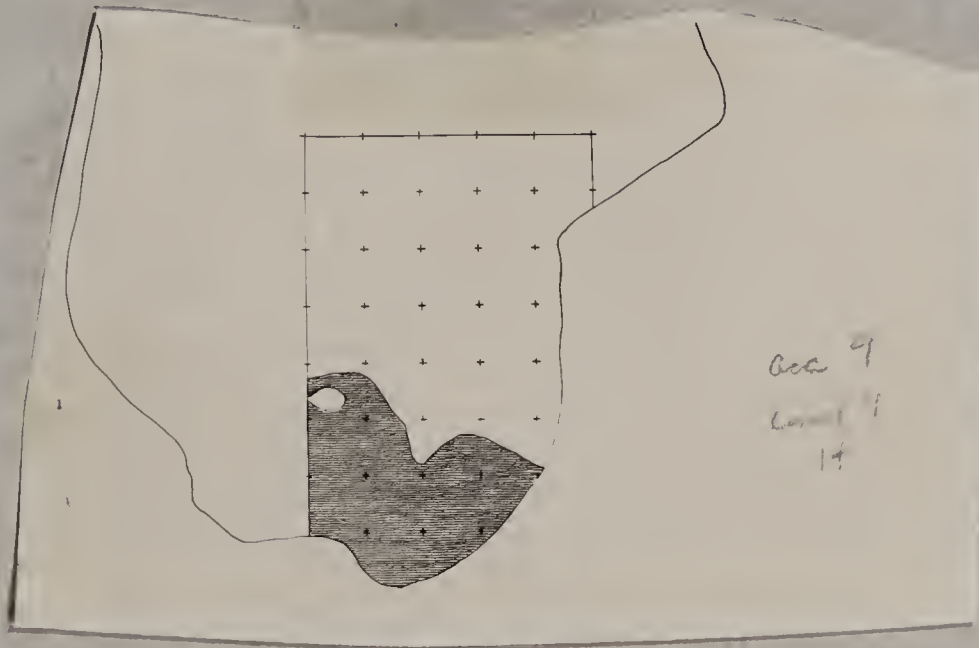


Fig. - Extent of Zone H, Occupation 9 in the excavated area of Romero's Cave.

Overlying the rather thick vegetable layer of Zone I and separating it from an equally thick and distinctive vegetable layer, Zone G was a relatively thin layer of ash and charcoal which is termed Occupation 9, Zone H. This is a relatively small occupation area in the back of the cave and is only represented by about 80 cubic feet of refuse. There is one grass pit that extended down from it. Much of the refuse material seems to have gotten burnt and there are numerous patches of charcoal. Whether these in part represented hearth areas or just burnt garbage material is difficult to say. In terms of the extent and of the thickness of the strata it would seem to be a very brief

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Overlying the rather thick vegetable layer of Zone I and separating it from an equally thick and distinctive vegetable layer, Zone G was a relatively thin layer of ash and charcoal which is termed Occupation 9, Zone H. This is a relatively small occupation area in the back of the cave and is only represented by about 80 cubic feet of refuse. There is one grass pit that extended down from it. Much of the refuse material seems to have gotten burnt and there are numerous patches of charcoal. Whether these in part represented the grass or just burnt garbage material is difficult to say. In terms of the extent and of the thickness of the strata it would seem to be a very brief

occupation, probably not more than a season. These squash remains and some of the other agricultural remains suggest that it occurred either during the summer or the fall. The small size of the area might mean only a couple of families, in other words a micro band.

The subsistence in spite of the large amount of burning of the stratum, is actually represented by a fair number of items. There were 34 unidentifiable bones on this layer. Besides the bones there are a number of tools that might be connected with the chase. These include Matamores and Catan points, an atlatl fragment, atlatl fore-shafts, mainshafts, and part of a spring trap. There also were a few scrapers which could have been used for preparing the skin of the animals caught in the hunt. Besides this relatively small amount of evidence for hunting there were 465 wild plant remains. I would suspect that this is far from representative of the total number that once existed in the stratum and I believe that much of the wild plant material had been burnt off and had become the charcoal of the stratum. There are a number of kinds of wild plant material that include a few grains of panicum, a few seeds of wild squash, some opunti leaves and agave quids. The thick and thin choppers may have been the implement which they used to chop up the vegetable material and making it ready for a meal. Agricultural remains are not overly numerous but there is quite a variety. Even from our rather limited sample it would seem that agriculture was a good deal more important than hunting. There are pumpkin and gourd remains, some corn remains, and some evidence of cotton. From the feces we have, some evidence that these people used peppers and were eating mature beans.

Besides subsistence activities there is some evidence that they did quite a bit of weaving. There are a number of kinds of string which are

occupation, probably not more than a season. These squash remains and some of the other agricultural remains suggest that it occurred either during the summer or the fall. The small size of the area might mean only a couple of families, in other words a micro band.

The subsistence in spite of the large amount of burning of the stratum, is actually represented by a fair number of items. There were 34 unidentifiable bones on this layer. Besides the bones there are a number of tools that might be connected with the chase. These include Matamoros and Catán points, an atlatl fragment, atlatl fore-shafts, mainshafts, and part of a spring trap. There also were a few scrapers which could have been used for preparing the skin of the animals caught in the hunt. Besides this relatively small amount of evidence for hunting there were 465 wild plant remains. I would suspect that this is far from representative of the total number that once existed in the stratum and I believe that much of the wild plant material had been burnt off and had become the charcoal of the stratum. There are a number of kinds of wild plant material that include a few grains of panicum, a few seeds of wild squash, some opuntia leaves and agave quids. The thick and thin choppers may have been the implement which they used to chop up the vegetable material and making it ready for a meal. Agricultural remains are not overly numerous but there is quite a variety. Even from our rather limited sample it would seem that agriculture was a good deal more important than hunting. There are pumpkin and gourd remains, some corn remains, and some evidence of cotton. From the feces we have, some evidence that these people used peppers and were eating mature beans.

Besides subsistence activities there is some evidence that they did quite a bit of weaving. There are a number of kinds of string which are

tied into a variety of knots. There are also some fragments of twilled mats. The final item, which is a tumpline, is made from cotton. This cotton was woven probably on a belt loom and was woven by what we call the simple one-over-one-type weave. However, the most important new activity of this horizon is the making of ceramics. These ceramics seem to have been basically coil made and the clay may have been collected from the arroyo bottom. There are small amounts of temper in it and then seems to have been fired in some sort of kiln with artificial draft; the pottery is fairly hard. Some of the pottery, particularly the black ware, was fired in well-controlled reducing atmosphere. The brown, brushed and the plain ware seems to have been fired in less well-controlled atmosphere which was mainly oxydizing. Not many rim sherds were found but there does seem to be some evidence of flat-bottomed bowls as well as storage or water jars. I greatly suspect that none of this pottery was made in the cave but brought in by the occupants to the cave from some other area; exactly where was the village of these people has not been determined.

In terms of cultural relations this Occupation 9 seems to represent a fairly definite break in our sequence, as indicated by the first occurrence of pottery. However, the projectile points, the types of atlatl fragments, the twilled mats, and most of the woven items indicate a great deal of continuity from the earlier Guerra horizons. In fact this new Mesa de Guaje component seems to be nothing more than the Guerra type culture plus ceramics.

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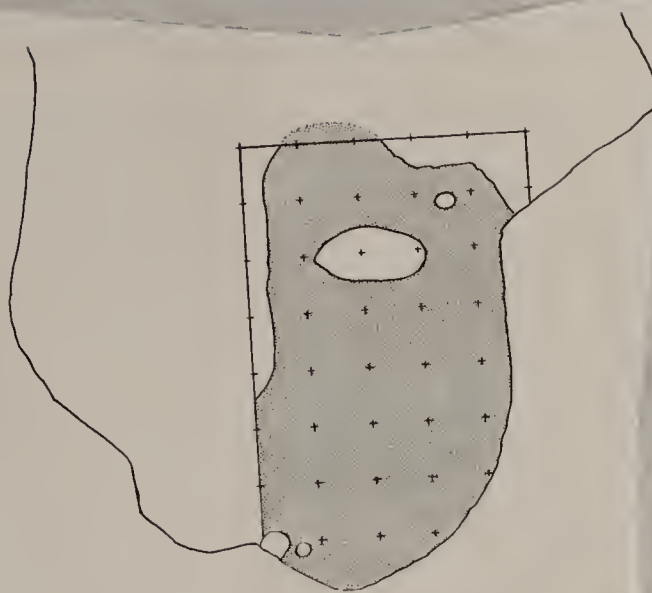


Fig. - Extent of Zone G, Occupation 10 in the excavated area of Romero's Cave.

Zone G, Occupation 10 was another marker layer in our excavation mainly because as we dug down, this is where the pot sherds stopped. It actually was a fairly extensive layer. In the front of the cave it was mainly composed of charcoal with very few patches of vegetable material. It was relatively thin. In the center part of the cave it was charcoal and reddish brown soil. I believe this colouring of the reddish brown soil is due to the fact that some of the vegetable remains had become partially disintegrated. In the same center area it also began to noticeably thicken. This thickness continued into the back of the cave where this layer was a solid mass of vegetable materials. Pollen studies as well as identification of several vegetable plants would seem to indicate that this was a wet period. One of the identified vegetable plants indicative of being wet climate was some manihot remains. Sticks from this horizon have been dated by Carbon 14 as 1,486 B.C. \pm -(M-). Other sticks from this layer plus some charcoal

Fig. - Extent of Zone G, Occupation 10 in the excavated area of Plover's Cave.

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from Zone H have also been dated and these give a date of 1,690 B.C. \pm -(M-). My personal opinion is that these dates probably represent the very beginning of this Mesa de Guaje phase.

Extending down from this layer was a single grass lined pit, that was a cache pit and contained a large number of corn cobs, and a pit which was filled with charcoal and a few pieces of burnt rock. The final pit was a burial pit. The contents of these pits plus the refuse and the estimated refuse from the unexcavated portion of our cave allow us to estimate that this layer contained more than 570 cubic feet of refuse. The extent and size of the cave in thickness would seem to indicate that it was occupied by a macro band. The vegetable material and the numerous domesticated plant remains would seem to say that it was a couple of seasons. The numerous pieces of corn certainly suggest that this may have been a place where the farmers lived from a corn planting through a harvesting season.

Sixteen bones - not identifiable - make up our slim evidence that these people hunted. A Mesa stem point as well as Catan and Matamores points, atlatl foreshaft and mainshaft as well as a fragment of a wooden trap and some scrapers seem to be the sort of implements that were concerned with the chase. Much more numerous than the bone remains were 698 wild plant remains. Though there were a wide variety of plants, Manihot, panicum, amaranth, agave and opuntia have been identified as being in the stratum. There are a number of implements that could have been used in gathering wild plants and preparing them for food. These would be baskets, nets, scraper planes, choppers, mullers, and various kinds of bags. Some of the bags and nets and baskets, of course, could also have been used in collecting their agricultural remains. The agricultural remains are both numerous and varied. There are long red- and yellow-seeded beans. As far as we can tell, these beans

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final pit was a burial pit. The contents of these pits plus the
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cave allow us to estimate that this layer contained more than 250
cubic feet of refuse. The extent and size of the cave in thickness
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agricultural remains are both numerous and varied. There are long
red- and yellow-seeded beans. As far as we can tell, these beans

seem to have been picked and prepared for food when the seed was ripe rather than when it was young, as it happened in the earlier horizons. There is a single seed of sunflower, there is a great deal of corn, and many of the cobs show evidence of teocentli integression. There is also some teocentli grains. Gourds, pumpkin and warty squash seeds, rinds and stems occurred. There also is string made of cotton. Our food remains from identifiable plant and bone specimens would seem to indicate that there was very little of any hunting and that their subsistence activities were mainly food collecting with some agriculture, perhaps 55 per cent food collecting, 40 per cent agriculture, and 5 per cent hunting. However, supplementing this rather gross estimate based on garbage we have analyzed nine feces from this same layer. The interesting thing about the feces is that they seem to show that these people ate mainly agricultural plants. Eight out of nine feces have agricultural remains in them, four have more than one agricultural plant in them, and the other four have a single type of plant in them. One feces was found that had only wild plant remains. Three of the nine with agricultural remains had either wild plants and/or bone. Thus our estimate from the feces remains would somewhat reverse our estimate of the subsistence pattern of these people; it would seem to indicate that perhaps 50 per cent of their food came from agriculture and 25 per cent from hunting and food gathering. Probably the actual truth of the matter is that, the two sets of data from the feces and the garbage remains should be averaged; I think this would probably give us a fairly accurate estimate. It is with this horizon that we found our first manos and metates. These, of course, are definite implements used for grinding up agricultural remains, particularly corn kernels.

Beside tools and remains giving us evidence of subsistence activities we have other tools that give us glimpses of some other things

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they did. The few scrapers would seem to show that the scraping of skins was not an important activity. We have no wood-working tools, but a number of the wooden tools are partially finished or were finished and then broken. Thus these people probably did some wood-working. There is some evidence that the making of chipped stone artifacts was still important at this time. We have a single antler flaker and a number of chips in the refuse, and we also have a new type of tool: an obsidian blade. This obsidian blade would seem to indicate that there had been a major shift in their tool-making techniques and that they were making cylindrical polyhedral cores out of obsidian and then striking off the blades from these cores. Again, one of the most important activities was weaving. We have two implements that can be connected with this, one is a pointed wooden stick that may have been used in making baskets and mats, while the other is a clay disk. This latter may very well be part of a spindle whorl for making string. String made on a spindle whorl is of a single cotton yarn which was Z-twisted. There also were strings made of two S-twisted soft yarns and some of these in turn are made into two-cord rope. There is also Z-twisted hard yarn made into 2-yarn cord, two-cord rope, and three-cord rope, as well as two S-twisted soft or hard yarn cords and some S-twisted yarn made into three-yarn cord rope. Both these strings as well as ~~yucca~~ ^{such as agave} fibres have been tied into a number of different knots, and granny knots. Some of this cord has also been made into nets of two different types: a simple laced net and a simple loop net. One fragment of these nets as well as a piece of woven cloth served as a sort of kilt. Other string, mainly the cotton string had been woven on a simple belt loom. Much of it was plain one-over-one-type weave, but there was some two-over-two-type weave. Also woven during this time period are a number of mats. Most of them were twilled and had square corners.

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two-over-two-type weave. Also woven during this time period are a number of mats. Most of them were twilled and had square corners.

We also found a large chequer-woven mat with a square corner. These twilled mats usually had a one-over-one type selvage. This type of selvage gave the mats the appearance of having a distinctive rim around them. Beside mats there were a number of baskets that had been made both in the form of bottles, bowls and pans. All of these were the split-stitch bundle foundation variety and a number of them had been decorated by weaving stitches of a different colour into them. Small pointed sticks may have been tools used in weaving and the paint stone may have been used for mixing paint dying the stitches. The ceramics were mainly brown and black wares and are very similar to the ones found in the previous layer and were made - I believe - in the same way. One difference is that one of the sherds of black ware has incising in its interior of its flat bottom. There are more sherds of the brushed and plain variety than there was in the previous horizons.

Another distinctive aspect of this layer was its one burial. The body, which had in its pubic area a mass of roots that may have been tied in place by a piece of string around the waist, had first been placed in a tightly flexed position. It had been laid on its back in two large rectangular mats. Then these mats had been folded over the head and feet and overlapped in the stomach region. On top of this overlap was placed a small mat. Next, the sides of all mats were folded over the and were folded over the whole mass tied by a series of lengths of strings. Many of these strings had been tied together to make longer pieces of rope. They were bound up in much the same manner as in the child burial of Zone I. Probably, while the bundling occurred, a shallow cylindrical hole had been dug and was lined with grass. The burial bundle was then placed in a sitting position in the grass-lined pit and covered with palm leaves and prickly pear leaves. Next, a large rectangular mat was placed

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over the leaves, the bundle and the top of the pit. On top of the mat near the burial's feet were placed two large bowl shaped baskets. Just off the mat, near the head in the top of the pit, were placed two water bottles which were inside a net bag. Finally, the pit was filled with refuse and this refuse contained corn cobs. Whether this inclusion was by accident or design, we do not know.

In terms of cultural affiliation this component, Occupation 10, is the type component for the Meso de Guaje phase. ^{but} There are a number of ~~significant relationships of these materials.~~ ^{of interesting resemblances.} As had been previously stated, many of the weaving techniques and agricultural remains as well as the projectile points seem to be directly derived from the Guerra horizon. The pottery is something new. Much of the black pottery does have a resemblance to that of the Huasteca, and I cannot help but think that our Meso black pottery is just a regional variant of Ponce black of the Tampico-Panuco region in the Huasteca. Thus, I think that our dates for this horizon probably are also a date for the Ponce horizon.

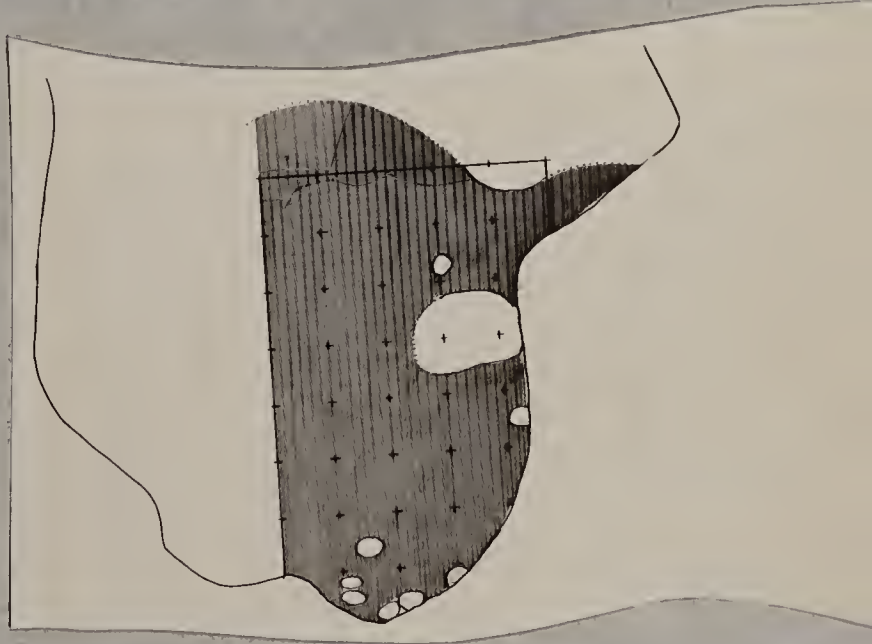


Fig. - Extent of Zone F, Occupation 11, in the excavated area of Romero's Cave.

Zone F was a thick brownish layer streaked with charcoal in the front of the cave that lay directly on the charcoal Zone G, Occupation 10.

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Fig. - Extent of Zone F, Occupation 11, in the excavated area of Romero's Cave.

Zone F was a thick brownish layer streaked with charcoal in the front of the cave that lay directly on the charcoal Zone G, Occupation 10.

Zone F contained what we are calling Occupation 11. As we shall see, this more correctly should be called Occupations 11. This layer at about the S 15 profile, after being fairly thick in the outer portion of the cave, slopes suddenly upward and became noticeably thinner. It also lost its streaky appearance and became very filled with vegetable material. Also at about this point it became separated from the lower Occupation 10 by a cave dust layer which we are calling Zone G-1. This layer like the one underneath it, ran from the front of the back to the back of the cave and was one of the ones which was fairly easy to discern and also fairly easy to number as to level.

Pollen analyses of some of the material from this zone reveal that it was deposited during a period which was slightly wetter than it is at present. Carbon and vegetable material have been analyzed by Carbon 14 and have revealed a date of 236 A.D. \pm -(M---). The layer, itself, thinner in almost all of our excavated portions, and probably was in most of the unexcavated portions. We have estimated that it contained about 500 cubic feet of refuse. Extending down from this layer were two fire pits, one of which, No. 14, had a large number of burned corn cobs in it. There also was a storage pit, Pit 15, and this contained a great amount of vegetable material and then down in the bottom an alligator bag which contained some teocentli seeds. Besides these pits extending down from this layer, there were five burial pits. Many of these seem to have been dug at just a slightly different time one from the other.

Now let us consider just what sort of an occupation this was. This situation seems to have been somewhat more complex than in our previous levels. I have a feeling that this so-called Occupation 11 represents a series of brief intermittent occupations and ceremonies by a small groups ^{over} of a relatively long period, and that the real homes

Zone 7 contained what we are calling Occupation 11. As we shall see, this more correctly should be called Occupation 12. This layer at about the 2 1/2 profile, after being fairly thick in the outer portion of the cave, slopes suddenly upward and became noticeably thinner. It also lost its starchy appearance and became very filled with vegetable material. Also at about this point it became separated from the lower Occupation 10 by a cave dust layer which we are calling Zone 8-1. This layer like the one underneath it, ran from the front of the back to the back of the cave and was one of the ones which was fairly easy to discern and also fairly easy to level.

Polish analysis of some of the material from this zone reveal that it was deposited during a period which was slightly wetter than it is at present. Carbon and vegetable material have been analyzed by Carbon 14 and have revealed a date of 230 A.D. ± (4---). The layer itself, though in almost all of our excavated portions, probably was in most of the unexcavated portions. We have estimated that it contained about 500 cubic feet of refuse. Extending down from this layer were two fire pits, one of which, No. 14, had a large number of burned corn cobs in it. There also was a storage pit, Pit 15, and this contained a great amount of vegetable material and then down in the bottom an alligator bag which contained some feculent seeds. Besides these pits extending down from this layer, there were five burial pits. Many of these seem to have been dug at just a slightly different time one from the other.

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of the occupants were in the ruins on the Mesa above the cave. There are a number of reasons for my believing that this is not one continuous occupation by a macro band, which it on the surface appears to be. First of all, we have the thin lensings of charcoal in the outer part of the zone toward the mouth of the cave. This would probably represent a series of very small brief occupations which happened to become separated by cave dust. ~~but the very close association of the layers~~ In the back they don't seem to have been separated, ~~but this may mean that due to the thinness of the stratum we couldn't draw on the separation~~ Secondly, the burials were deposited at a different time. Burial 3 is very definitely on top of burial 4. These were both dug down from the lower part of the zone. Also, Burial 9 was on top of Burial 8, and Burial 9 seemed to have actually been dug in part through the original burial pit of Burial 8. Burial 7 also seems to come from almost above the top of the stratum. Thus each one of these burials seems to have been made at a slightly different time. Also, the burials ~~are~~ but one, are in pack-boards with tumplines and the main ceremony in the wrapping of these burials seems to have taken place outside the ~~cave and~~ ~~when the bundles~~ brought in; in other words, these are not inhabitants of the cave who died during the occupation, but rather people who lived outside the cave and then died and were brought in to this special burial place. Another factor which makes me believe that this is an intermittent occupation is that we have vegetable materials that seem to represent all periods of the year. Certainly the thickness of the strata in the back of the cave does not justify the belief that it was a continuous occupation throughout the whole year. Thirdly, as we shall see, this occupational level is a component of the Palmillas culture, and outside the cave the Palmillas culture built most of the large ruins in the area that had large amounts of pottery. In our cave deposits we found a very limited amount of pottery. Thus it is hard

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for me to believe that the abundant ceramics these Palmillas people used outside the cave was little used inside this cave. Thirdly, nowhere in this deposit was anything we could honestly call grass bedding. Thus again it looks like this occupation was laid down by a series of visits from the people who were living at the ruins above the cave.

Now let us turn to evidence of their subsistence activities. Here we have a very ~~very~~ adequate sample both of preserved materials as well as a number of portions of feces. Unfortunately, only three of these ^{later} have been analyzed. There were 116 bones and some fragments of skin. Animals which these people hunted included deer, peccary, jaguar, evidently an aligator, and some birds. Implements that might be connected with the hunt are relatively numerous. They include Catan, Matamores, San Lorenzo, and Verde arrow points. There also were a number of arrows, foreshafts and mainshafts found in the refuse. Palmillas, corner-notched, Nogales, Tortugas and Abasolo dart points occur along with a wooden atlatl blunt, atlatl foreshafts and mainshafts. Dart remains are still more numerous than those connected with arrow. Other tools that could have been used in preparing things killed in the chase are various scrapers and choppers as well as a skin flesher and awl. Thus it would seem these people did some hunting. However, their hunting was nowhere near as important as their plant collecting activities. In the layer we have 3,264 plant remains. Most of these are huapillas, opuntia and agave. However, there are wild squash seeds, some fragments of manihot, amaranths, panicum, tripsicum, as well as many other eatable wild plants. Implements that could have been used in preparing these wild plants for a palatable dish were mortars and pestles. These plants also may have been collected and brought into the cave in baskets and

for me to believe that the abundant ceramics these Palmlis people used outside the cave was little used inside this cave. Thirdly, nowhere in this deposit was anything we could honestly call grass bedding. Thus again it looks like this occupation was laid down by a series of visits from the people who were living at the ruins above the cave.

Now let us turn to evidence of their subsistence activities. Here we have a very ~~very~~ adequate sample both of preserved materials as well as a number of portions of feces. Unfortunately, only three of these have been analyzed. There were 110 bones and some fragments of skin. Animals which these people hunted included deer, peccary, jaguar, evidently an alligator, and some birds. Implements that might be connected with the hunt are relatively numerous. They include Gatan, Matamoros, San Lorenzo, and Verde arrow points. There also were a number of arrows, foreshafts and rainshafts found in the refuse. Palmlis, corner-notched, Nogales, Tortugas and Abasco dart points occur along with a wooden atlatl blunt, atlatl foreshafts and rainshafts. Dart remains are still more numerous than those connected with arrow. Other tools that could have been used in preparing things killed in the chase are various scrapers and choppers as well as a skin flisher and awl. Thus it would seem these people did some hunting. However, their hunting was nowhere near as important as their plant collecting activities. In the layer we have 3,364 plant remains. Most of these are huskies, opuntia and agave. However, there are wild squash seeds, some fragments of maniot, amaranth, panicum, tripsacum, as well as many other edible wild plants. Implements that could have been used in preparing these wild plants for a palatable dish were mortars and pestles. These plants also may have been collected and brought into the cave in baskets and

net bags. However, more important than the food plants are the agricultural plants. Here we have a large variety. These include gourd remains, cucurbita mixta, cucurbita moschata, and cucurbita pepo. In the latter, the pumpkin, there seem to be a number of varieties. There also are many corn cobs, over 2,000 in this layer, and again we seem to have a number of different races of corn. Besides the corn we have a number of grains of teocentli. Some of these teocentli grains were set aside especially in an aligator bag in Pit 15. Beans are fairly numerous and include a black, yellow, and red-seeded variety. There also are a couple of pods of what might be lima beans. In the feces we found fragments of chili peppers and sun flowers. Also we found in the garbage fragments of molcajete bowls in which the chili and sunflower seeds may have been ground. Also, there was a rectangular and cylindrical mano and fragments of metates, which of course, could have been used in preparing some of the other food and of course the ollas and bowls may have been used to cook these foods in. Besides these edible domesticated plants we have pipes and cigaretts and fragments of tobacco. Also, a fair number of fragments of cotton string was found throughout the refuse and burials. A clay disk may have been part of a spindle whorl which took the original cotton fibres and wound them into string. There also are some cotton seeds on this level and in the feces. They may have eaten cotton seeds probably to get the grease out of them. In terms of the preserved food stuff it would seem that we are dealing with a horizon that got their subsistence from a 50 per cent wild plant, 45 per cent agricultural remains and 5 per cent hunting. The three feces analyzed, however, reveal a rather different picture. Here all three are full of agricultural materials and all of them have more than two agricultural kinds of plants in them. Two

not bags. However, more important than the food plants are the agricultural plants. Here we have a large variety. These include ground remains, cucurbita mixta, cucurbita moschata, and cucurbita pepo. In the latter, the pumpkin, there seem to be a number of varieties. There also are many corn cobs, over 2,000 in this layer, and again we seem to have a number of different kinds of corn. Besides the corn we have a number of grains of tobacco. Some of these tobacco grains were set aside especially in an algarroba bag in Pit 15. Beans are fairly numerous and include a black, yellow, and red-seeded variety. There also are a couple of pods of what might be lima beans. In the feces we found fragments of chili peppers and sun flowers. Also we found in the garbage fragments of molcajete bowls in which the chili and sunflower seeds may have been ground. Also, there was a rectangular and cylindrical mano and fragments of metates, which of course, could have been used in preparing some of the other food and of course the olla and bowls may have been used to cook these foods in. Besides these edible domesticated plants we have pipes and cigarettes and fragments of tobacco. Also, a fair number of fragments of cotton string was found throughout the refuse and burials. A clay disk may have been part of a spindle wheel which took the original cotton fibers and wound them into string. There also are some cotton seeds on this level and in the feces. They may have eaten cotton seeds probably to get the grease out of them. In terms of the preserved food stuff it would seem that we are dealing with a horizon that got their subsistence from a 50 per cent wild plant, 45 per cent agricultural remains and 5 per cent hunting. The three feces analyzed, however, reveal a rather different picture. Here all three are full of agricultural materials and all of them have more than two agricultural kinds of plants in them. Two

out of the three have some wild plant remains, while two out of the three have some evidence of game (either bone or feathers or skin). Thus the feces would reveal that probably 60 per cent of their food came from agriculture and 20 per cent from food gathering, and 20 per cent from hunting. Again I suspect that an average of the wild preserved remains and the estimate based on the feces probably would give us a fairly accurate picture.

From the garbage and the material associated with the burials we get a fair glimpse of other activities besides subsistence. It not only tells how they lived in the cave but also probably tells what their activities were in the ruins above the cave, since we believe that these occupations were only brief visits from these ruins. There is some evidence that they were making projectile points possibly in the cave. The bone flaker, the chips, the numerous projectile points all indicate this. Also, the numerous blades and the small fragment of what might be a polyhedral core hint at this activity. Again we have a large number of choppers and scrapers. Some of them are made from limestone which may very well have come from the walls of the cave itself. Thus, perhaps some of their casual activities when they visited the cave was to sit here in this cool place and make chipped stone implements. Another activity was probably their making of various wooden tools. A number of the atlatl foreshafts are unfinished and a fair number of whittled and cut sticks occurred throughout the refuse. There also is a fragment of a stone bark beater that could have been used for wood (or bark) work. Besides this there are a fair number of celts which could have been used for cutting up larger sticks, though I would suspect that the use of celts was probably adapted to outside conditions to either cut

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down the bush for corn fields or to cut up poles for building houses in their village of ceremonial center. This brings us to another tool making activity, that is the grinding of stones. The celts, the manos, metates and the pestles all are ground of stones. This is an entirely new activity which we have not met before. Other activities which may have not taken place in the cave but certainly were done by the Palmillas people was the working of leather. The scrapers, the awl, the flesher and the antler piercer, all occurred in the garbage and hint that some leather working was done in the cave. The fragment of an alligator bag, some leather thongs, a jaguar skin belt, two or three fragments of deer skin, and a fragment of a sandal, that is huarachi, all are objects of leather that has been manufactured.

However, a very important activity for these people probably both in the cave as well as in the ruins was weaving. There are a large number of yucca strands which have been stripped into sections and many of them bear knots. This, of course, would be a primitive kind of string. However, there is in abundance a wide variety of different kinds of string with different numbers of yarn and different kinds of fibres used. ~~This is~~ ^{all are} mainly hand-made. There however are definite cotton threads that were made on a spindle whorl. Besides the actual twisting the yarn to make strings, a number of fibres were braided together to make strings, a new technique for making string. The uses of string, of course, are infinite. Many of them were used for tying Hangman's knots, slip knots, granny knots, overhand knots, square knots, and sheephead and lar~~k~~kshead knots. A number of strings that were used ~~for tying was~~ for making carrying loops, and other strings were used for tumplines. Some of the strings, of course, were used for making nets. We have a couple of pointed sticks

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that could have been used to weave their simple loop nets. Some of these nets were bags, and one of them actually was used like a piece of cloth. The pointed stick also could have been used for making baskets. A few of the baskets are twilled mats that had been folded in half and then sewn at one edge. These, of course, became square baskets. Most of the other basket remains are of the split-stitch bundle foundation variety and are mainly bowls. Another carrying type basket is what we are calling packboards. Here they are first made of two hoops of sticks ^{by} tying them together; next a large net has been sewn and tied to each of these hoops, thus making two more or less dip net devices; next the two hoops with the net inside were hinged together by loose strips of yucca, thus making two hoops with net covers that fold together. These could be used as baskets. Most of these hoops, all of which were found associated with burials, have a tumpline from one side to the other at right angles to the hinge section. As may be seen from the Codex Maya Tlotzin, this type of packboard with a tumpline was a common implement among the Otomi and the Chicamecs north of the Huasteca. It seems to begin to be used in Tamaulipas by at least 300 A.D. However, the most impressive weaving objects are the numerous mats. The basic technique in weaving all these mats is twilling. Many of these mats, particularly those associated with the burial, are between three and four feet wide, and four and six feet long. In this twilling process they have learned the technique of skipping and multiplying weave to change the slope of the twill and thereby making a line. The line in turn ^{formed} ~~could form~~ a series of geometric squares in the mats. Many of these mats have a very ornate design. The older type of mats with special corners are also continued to be used, but the decorated twilled variety are more common. There also is one mat which was some sort

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of a head-dress. This mat is roughly in the form of a short-stemmed T and was over the head of one of the burials. The best weaving was done on some sort of a belt loom using cotton yarn. Two kinds of weaving seems to have been done, one plain weaving - that is one-over-one - and two-over-two twilled weaving. I expect that the weaving of cotton was a fairly important industry. Another activity which I don't think was done in the cave, but certainly was done by these people since we have the result in the cave, was the making of pottery. Though we did not get a great number of sherds in the refuse, we did get some. The pottery has a will-knit paste, is coil-made, has small amounts of fine temper, and seems to be for the most part fired in a special kiln. The simpler wares have plain or brushed surfaces; but there are some fragments of very nice pots of either red, black or plain polished or slipped surfaces. We have little evidence of decoration but there are a few sherds that have engraving cut through their outer polished and slipped surfaces. Three or four sherds seem to come from Molcajers and had geometric incising on their interiors. Even with our limited sample of sherds it was easy to see that these people were making a variety of vessel forms. We have fragments of water jars, plates, bowls with or without slab feet, and jars with or without handles as well as effigy jars, often shaped in a human or animal head. There also are a whole series of clay pipe fragments, most of them seem to have been of the platform variety and relatively small. These were also hand-modelled and made of an extremely fine paste clay. There is one fragment of^a mold-made figurine, showing that they had still another technique of manufacturing pottery.

This mold-made figurine plus material with the burials and the refuse give us some hint as to what their wearing apparel was. Around

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~~buttocks~~
their ~~waist~~ they seem to have had kilts which were open at the front, in other words, a rectangular piece of cloth wrapped around the waist like a towel with the opening in the front. Holding up this kilt were belts. One of our belts is of threaded beans and bird-bone beads while another is a piece of jaguar skin. Some of our leather thongs, yucca strands and so-called woven tumpline also may have been belts. This kilt was open in the pubic region and on two of the burials we have a sort of fringe of root fibres that hung down from the belt over the opening in the pubic region. Some of the figurines from the ruins of the same culture seem to display a similar wearing apparel. We have a number of bird bones and shell beads and a fragment of a gorget with our burials. Their use may be seen on the figurines where there are obvious necklaces, medallions and bracelets. Also, the figurines have ear plugs which we did not find in any of the cave remains but certainly some of the people might have worn such. Many of the figurines also are bare-footed but a few of them have some sort of a sandal, and our single fragment of our huarache may have been the sort of wearing apparel depicted in the figurines. One additional fragment of wearing apparel is the T-shaped twilled cap found on one of the heads of one of the burials. The ~~wide~~ ^{went} of the head of the T (or its horizontal parts)/down from the head past the ears and ^{was} draped over the chest, while the base of the T seems to have been quite wide and ran across the top of the head. Some of the figurines also show some sort of more inverted conical type caps, and some have turbans. We found no evidence of this in our cave remains.

The final activity in the cave was the burying of the dead. As I have stated before, they were buried in at least three different times, and maybe all five of the burials were buried at five different

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The final activity in the cave was the burying of the dead. As I have stated before, they were buried in at least three different times, and maybe all five of the burials were buried at five different

times. Also, one of the treasure hunters' holes had in its back shelf a fragment of a packboard and a piece of net. Thus I suspect that probably another burial occurred in this layer. The skeletons that Romero analyzed from this cave, may have been this burial. All but one of these burials have some features in common. All are in pits and under large slabs of rock. Four (and probably the fifth that had been looted) were in packboards with a tumpline. These five burials seem to have been flexed and then wrapped in a series of mats which were tied by strong rope and/or yucca strands. ^{all} ~~One~~, however, seems to have some individual features. The looted one and Burial 8 had no accompanying remains and also were in rather poor condition. Burial 9 had a fragment of a water bottle and wound stick in the pubic area in it. Burial 7 had a cotton cloth kilt, some pubic ^{and a leather belt. Burial 4 had a smaller bag filled with fibres,} fibres, string and an awl, a pubic fringe, a net kilt, a threaded bean and bird-bone belt, a gorget, and a T-shaped mat head dress. The other burial, No. 3, was rather different. It was in a pit, overlapping over Burial 4, and it was poorly preserved. It had been covered by a large mat; it was in a flexed position, but the head was missing. There was a large amount of pubic fibres and string around the pubic area, perhaps showing that it too had a kilt. In place of the head were a mass of fibres. Sticking in the ribs was an arrow and there were a number of other arrow shafts in the same pit that may have pierced the body. This certainly looks to have been some sort of a human sacrifice. As has been stated before, in the Aztec codices there are drawings of Otomi burials. The drawings show bodies wrapped in twilled mats in packboard, buried in caves in much the same manner that we found in this Palmillas component.

In terms of cultural affiliation it is obvious that at this occupation level we have a very new and different group as there are

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had no accompanying remains and also were in rather poor condition.
Burial 9 had a fragment of a water bottle and wound stick in the
public area in it. Burial 7 had a cotton cloth shirt, some public
fibres, string and an awl, a public fringe, a net shirt, a threaded beam
and bird-bone belt, a gonglet, and a T-shaped and head dress. The
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lapping over Burial 4, and it was poorly preserved. It had been covered
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In terms of cultural affiliation it is obvious that at this
occupation level we have a very new and different group as there are

many examples of new types of artifacts. The Palmillas corner-notched points, the Verde points, the arrows, the clay platform pipe, the complexly woven mat, the packboards and packboard burials, the wide variety of agricultural plants are distinctive aspects of this component of the Palmillas phase. Scrapers, some of the simpler weaving techniques and many of the string types as well as the atlatl types and various of the Abasolo, Nogales, and Tortugas projectile points show continuity from the earlier level. The amount of rather specialized material would seem to hint that for the first time at this occupation level we have a culture which may have had some sort of full-time specialists and probably markets as a number of implements seem to have been traded in, from considerable distances. Thus we have an urban or semi-urban culture, represented at this time period about 300 - 700 A.D.

Directly above this layer in both the front and the back of the cave we have a white ash and cave dust layer which is Zone F-1. It does not seem to have been an occupation layer, though we found occasional points and occasional pot sherds in it. Above this layer we have a burnt charcoal stratum.

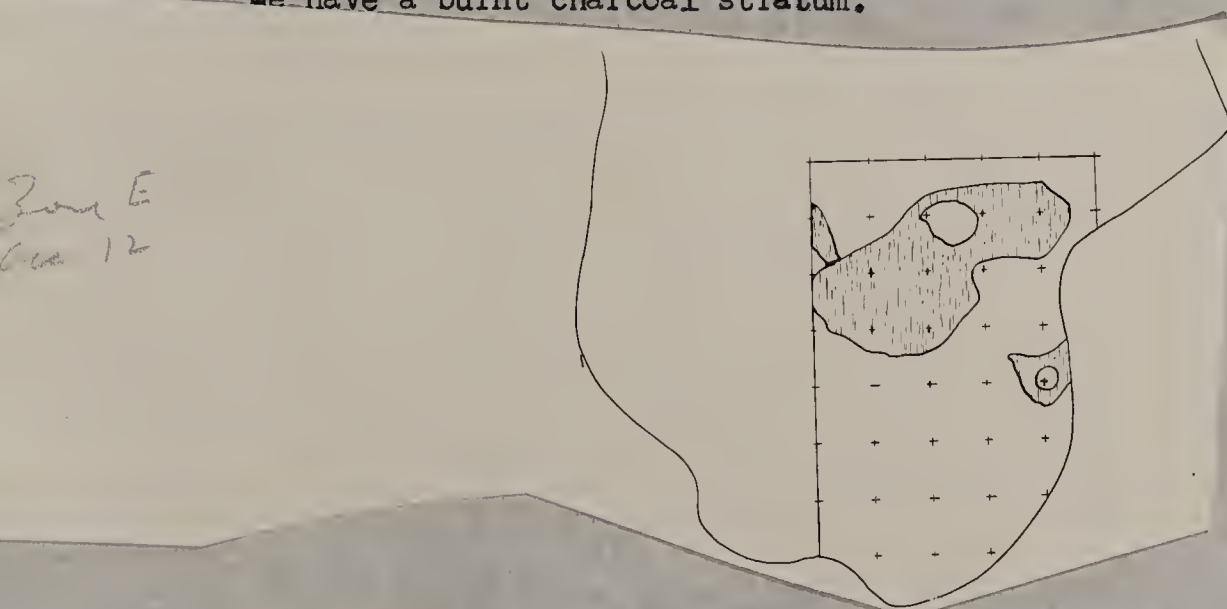


Fig. - Extent of Zone E, Occupation 12 in the excavated area of Romero's Cave.

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This charcoal stratum, Zone E, Occupation 12, was mainly in the front of the cave and was composed of only about 40 cubic feet of refuse, most of which was darkened ash. However, Pit 16, which extended down from it, was filled with vegetable material and was grass-lined as if it was a bed. Also, Pit 3 was mainly a large hearth area filled with a great deal of charcoal and burnt rock. It did have some burnt vegetable material in it. Due to the small size of the occupation area plus its limited thickness I would guess that it was occupied by a micro band for a very short season and the squash remains would again indicate that this season was either part of the late spring or part of the early summer.

Now turning to the remains that tell us something about their subsistence activities we first had 110 badly charred bone fragments, which were not identifiable. We also had two rather large bones, both of which were uncharred and seemed to have come from a deer. Implements connected with the chase are almost as numerous as the bone material as far as bulk is concerned. In this refuse were Verde, Abasolo, Tortugas, Matamores and Catan points, all of which may have been used with atlatls. Also occurring were San Lorenzo arrow points and part of an arrow fore-shaft. A discoidal scraper and a cane knife as well as thin flake scrapers may have been used in preparing the skins of animals killed in the chase. Much more numerous than the bone remains were the wild plant remains which number 1,436. These include agave, opuntia and wild squash. The chopper, the scraping planes and the mullers, all may have been used in preparing these very numerous remains. Almost as important as the wild vegetable materials were the remains of agriculture. There were over 1,000 corn cobs, many of which came from Pit 16, there are pods and seeds of four varieties of beans, there are warty squash and pumpkin remains, there are some clay pipes, cane cigarettes and a possible tobacco leaf. There were in the feces a couple of pepper seeds. There was also much of a string that was

This charcoal stratum, Zone E, Occupation 12, was mainly in the front of the cave and was composed of only about 40 cubic feet of refuse, most of which was darkened ash. However, Pit 16, which extended down from it, was filled with vegetable material and was grass-lined as if it was a bed. Also, Pit 3 was mainly a large hearth area filled with a great deal of charcoal and burnt rock. It did have some burnt vegetable material in it. Due to the small size of the occupation area plus its limited thickness I would guess that it was occupied by a micro band for a very short season and the squash remains would again indicate that this season was either part of the late spring or part of the early summer.

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made of cotton. The only other activity that there is any indication of is the numerous fragments of string and pottery remains here. Though we had about 150 sherds, many of them were quite small; however, beside brushed and plain sherds we did have some polished red and polished black that had engraved designs cut through them. Thus our ceramic complex is very much like that of Occupation 11. On the basis of the ceramics and the points and the vegetable material, I think we are safe to conclude that this was a temporary occupation, perhaps during a corn harvesting season, by a micro band of people who had the Palmillas type of culture.

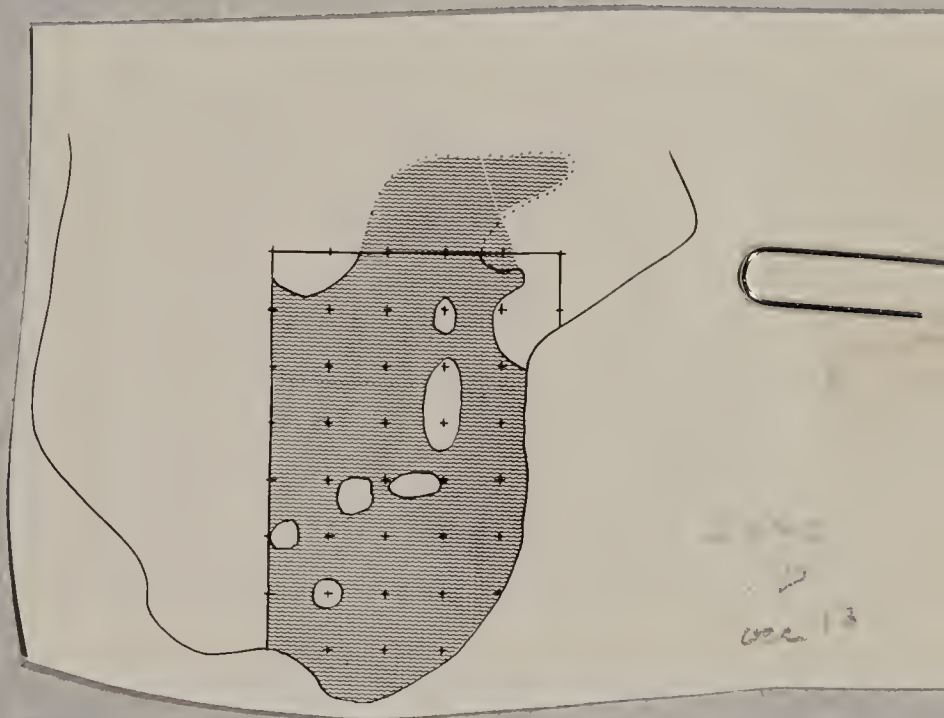


Fig. - Extent of Zone D, Occupation 13, in the excavated area of Romero's Cave.

Above these levels of relatively poorly preserved vegetable material, which were filled with ash and charcoal, occurred a ~~big~~ thick layer of well-preserved food stuff from the front of the cave to the back of the cave. In the front of the cave this layer is often one foot thick, while in the back it may be only three or four inches. This lowest well-preserved vegetable layer is called Zone D, Occupation 13. It has been estimated to include about 618 cubic feet of preserved refuse material. The pollen from this layer as well as the bone material and the preserved vegetable

made of cotton. The only other activity that there is any indication of is the numerous fragments of string and pottery remains here. Though we had about 150 sherds, many of them were quite small; however, besides finished and plain sherds we did have some polished red and polished black that had engraved designs cut through them. Thus our ceramic complex is very much like that of Occupation II. On the basis of the ceramics and the points and the vegetable material, I think we are safe to conclude that this was a temporary occupation, perhaps during a corn harvesting season, by a minor band of people who had the Palmar type of culture.

Fig. - Extent of Zone D, Occupation I, in the excavated area of Romero's Cave.

Above these levels of relatively poorly preserved vegetable material, which were filled with ash and charcoal, occurred a ~~1/2~~ thick layer of well-preserved food stuff from the front of the cave to the back of the cave. In the front of the cave this layer is often one foot thick, while in the back it may be only three or four inches. This lowest well-preserved vegetable layer is called Zone D, Occupation I. It has been estimated to include about 618 cubic feet of preserved refuse material. The pollen from this layer as well as the bone material and the preserved vegetable

stuff indicate that we are again dealing with a period that was as dry as it is at present. In two or three little patches, within this well-preserved vegetable layer, were burned areas with fire-cracked rock which might be interpreted as being hearth areas. However, besides these possible hearth areas there were six very definite pits. Two of these pits were completely lined with grass, perhaps for beds. Two of the other ones, which were also vegetable lined, contained sleeping mats. Thus I think we can safely say that there were four beds within the area. Another pit was filled almost entirely with corn cobs while a final pit was filled with vegetable materials. Much of the food stuffs look like they have been put in there quite purposely and a number of wooden artifacts were with them. ~~From~~ ^{upon} the basis of this thick vegetable material as well as the kinds of plant remains that we found in it, I think we may safely estimate that a macro band ~~lay~~ ^{deposited} down this layer in a seasonal occupation. The squash remains and some of the plant remains would seem to indicate that they occupied this layer and deposited it during the spring and summer months.

141 bones occurred in this stratum and there were a number of identifiable bones, some of these are deer, a few of peccary, a couple are of rats; there is one bone that is very definitely a buffalo, and one tooth that might be of a dog. Actually, this does not represent a great deal of meat. However, the implements associated with the hunt and with the preparation of meat are very numerous. These include both thick and thin scrapers as well as elongate scrapers. The discoidal scrapers and small triangular end scrapers that were probably hafted in some sort of cylindrical sticks; all of these could have been used to prepare hides as well as fix meat. Projectile points were quite numerous and include atlatl points of the types called Abasolo, Nogales, Tortugas, Palmillas, Verde, Matamores and Catan. There are a couple of fragments of atlatl foreshafts

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and a few possible fragments of mainshafts. However, at this time, much more numerous than the atlatl remains are points^{possibly} and mainshafts of arrows. The points belong to the Jaumave, Frenos, and San Lorenzo types. Also, there are at least two pieces of small spring traps. However, as said before, most of the layer was composed of vegetable material and we counted and classified 7,709 vegetable remains. This probably represents about two-thirds of all that occur. Among these remains are the opuntia, cactus, agave and huapillas. There were some remains of wild squash, wild runner beans, and amaranth. Tools which might have been used in preparing these plants were scraper planes and various saw-like choppers. Again, we have a variety of agricultural remains but not so great as in the previous horizons. There are gourds, pumpkins, warty squash and remains of the small walnut squash. There are at least three kinds of beans as well as lima beans, two or three varieties of corn, and teocentli. Though we found no actual tobacco leaves, an effigy pipe and various cigarette butts[↑] would seem to indicate that such were used. Cotton occurred but was extremely rare. In terms of the garbage[↓] remains they would seem to have been primarily plant collectors who did quite a bit of agriculture and little or no hunting. The two feces examined would tend to back this up. Both of these had as many more fragments of wild plants in them than they had of agricultural plants, and only one of them had a small piece of crushed bone. Other activities besides subsistence show that they did some chipping of flint and still made obsidian blades from polyhedral cores. The antler flaker may have been one of the tools they used in chipping a flint. The scraping of skins seemed to have been an important industry as we have fragments of sandals and some deer skins; we also have some split conical wedges and plain wedges that may have been used to tie down the skin while it was being scraped by discoidal and triangular end scrapers.

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Like the previous horizons, weaving is an important industry. There were a large number of fragments of string but the string is somewhat different from that of the previous horizons as for most of it is S-twisted hand-made yarn, and there is very little spindle whorl made cotton yarn. The yarns were twisted in various ways to make different kinds of cord. Again in this horizon we seem to have a wide variety of knots both tied on string and strands of the yucca. While some of this string was used for tying, most of the strings were used to make knotless and simple-looped nets as well as a simple-loop net with a rod foundation. There is one fragment of a plain cotton-woven cloth that was made on a belt loom with one ~~wart~~^{weft} and one weft. Mat fragments are fairly numerous and there are a couple of whole mats. Most of them came out of our sleeping pits. All of these are twilled but they are extremely different from those of our previous horizons in that the fancy decorations made by skipping elements while twilling are almost entirely absent. The small pointed wooden stick may have been used in weaving these implements. They also may have been used in making their split-stitch bowl-shaped baskets. These bowls again are not so well made nor so tightly woven as either those of the Palmillas or Mesa de Guaje horizons. One piece of turtle shell had been pierced and may have served as a rattle. The most numerous cultural items from this horizon was the pottery. Though there is some pottery that seems to carry on from previous horizons, most of it is of new and of different types. This pottery like that of the previous horizons is coil-made, but the paste is more poorly knit and the temper is larger. It also has been fired in relatively poorly controlled oxydizing atmosphere. The predominant surface finishes are brushed and crudely smoothed. However, there are some surfaces that are smudged black and a few that are corrugated. Rarely are there any decorations on them, though one type has crude engraving on it *and a few bowls have interior markings.* The vessel forms seem to be limited to relatively simple bowls without

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vessel feet and wide-mouth jars without handles. The general appearance of the pottery give the impression that we are now dealing almost entirely with service utilitarian ware and have no ceremonial ware or fine specialized ware.

In terms of cultural relations Zone D, Occupation 13 is our first component of the San Lorenzo phase. This phase differs from previous ones in having a number of small side-notched and triangular arrow points, many more arrows than atlatls, in having the crude San Lorenzo type corrugated and black ware and crudely engraved pottery. They also had simple twined mats only. There are various types of scalloped edged leather sandals. There are, of course, many hold-overs from the previous horizons both in projectile points and scraper types as well as the more general string types and some of the wooden tools. However, we have a very different horizon from Palmillas and what evidence we saw of specialized craftsmanship or possibly full-time specialists in the Palmillas horizons seems to be totally lost by San Lorenzo times.

Zone C
See 14

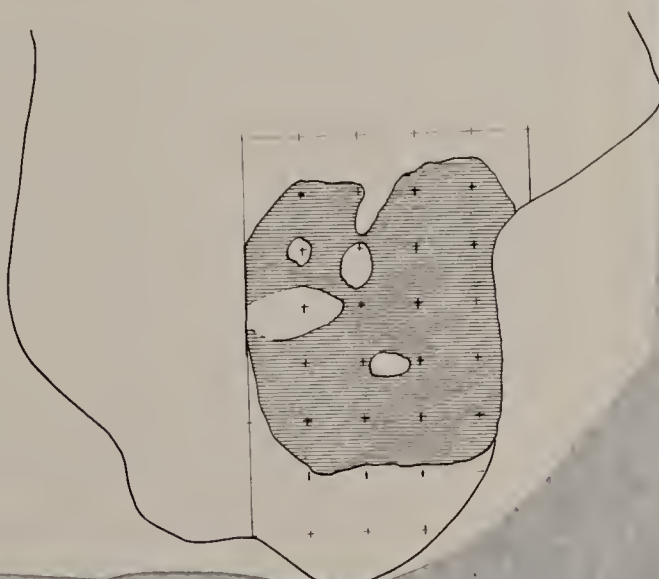


Fig. - Extent of Zone, Occupation 14, in the excavated area of Romero's Cave.

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Fig. - Extent of Zone, Occupation 14, in the excavated area of Romero's Cave.

Usually capping the vegetable layer Zone D was a very thin, half an

inch thick ash layer, called Zone D-1. This underlay another relatively thick vegetable layer which was in the middle part of our excavated area. This vegetable layer that looked so very much like Zone D was called Zone C and Occupation 14. It was somewhat less extensive than our previous one and only was composed of 265 cubic feet of refuse. Its features were not too numerous. There was one pit filled with fire-cracked rock and charcoal, one grass-lined pit or bed, a grass lined pit or bed, a grass-lined pit with a mat inside that definitely was a bed, and there was a large depression in the west part of our excavation that was filled with grass and seems to have been part of this layer. The latter may have in part been caused by some of the treasure hunting excavation. In terms of the thickness of the layer and fireplace, and so forth, I would guess we are probably dealing with a macro band who was here for about a season.

During their stay in this season they did a little hunting. We found 119 unidentifiable bones. We found a few identifiable deer bones, a couple of jaguar bones, rat bones, and some bird bones. There also was a fragment of deer skin and jaguar skin. Implements that might be connected with the hunt were fairly numerous. Dart points include Abasolo, Nogales, Palmillas, Verde, Catan and Matamores types. More numerous than these were arrow points which include San Lorenzo, Jaumave, Fresno and Starr. There also are a large number of arrow main shafts and foreshafts. Wild plants are extremely numerous and here we counted all of them; the stratum had 7,274 wild plant remains. Among these wild plant remains are some fragments of wild squash, runner beans, amaranth as well as numerous desert plants like cactus and agave, huapillas and the like. Some of our choppers and hammers may have been used to mash up these wild food remains. Almost as numerous as the wild plant remains are agricultural remains. However,

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twilled mats that had a painted design on them.

As far as cultural affinities are concerned this group definitely ties in with Occupation 13. It is considered to be another, perhaps smaller, component of the San Lorenzo phase. The numerous pot sherds, which are mainly brushed and smudged ware, although there are some corrugated and engraved sherds, are a further link. This ceramic activity is probably our best reason for tying them in with the previous culture.

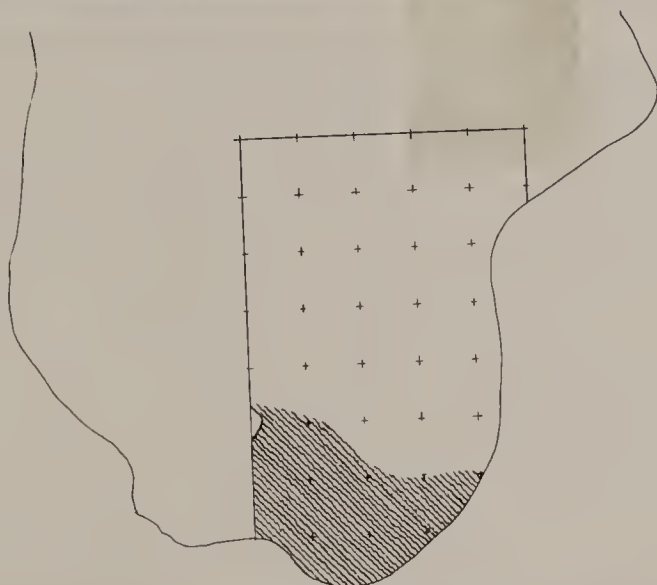


Fig. - Extent of Zone E, Occupation 15 of the excavated area of Romero's Cave.

Over all the cave dust layer called D-1 and in part above Zone C, was another thin layer of vegetable material in the back of the cave. This seems to have extended in fairly large amounts into the unexcavated portion. However, as far as our excavation is concerned, there was little more than 25 cubic feet of refuse in this layer. Extending down from this layer was one grass-lined pit with a mat in it, and throughout the layer were patches of charcoal that may or may not have been hearths. On the basis of the thinness of the layer and the relatively small occupation, I would guess that this is an occupation by a nomadic micro-

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Fig. -- Extent of Zone B, Occupation 13 of the excavated area of Horno's Cave.

Over all the cave dust layer called D-1 and in part above Zone C, was another thin layer of vegetable material in the back of the cave. This seems to have extended in fairly large amounts into the unexcavated portion. However, as far as our excavation is concerned, there was little more than 25 cubic feet of refuse in this layer. Extending down from this layer was one grass-lined pit with a mat in it, and throughout the layer were patches of charcoal that may or may not have been hearths. On the basis of the thinness of the layer and the relatively small occupation, I would guess that this is an occupation by a nomadic micro-

there is one difference. Though we have quite a wide variety, the numerous different varieties or races of domesticated plants which we had in Palmillas seem to be gone. We still have gourds and a couple of varieties of pumpkins as well as warty squash. There are still four varieties of beans, but the lima beans are absent. There are a large number of cobs of corn, but most of them seem to be of a race called Breve de Pidlla. Cotton again occurs in some of the string and there are a few little fragments of peppers. No tobacco leaves were found but we have some cigarette butts and part of an effigy of an elbow clay pipe. I think the conclusion that these people were plant collectors who did almost as much agriculture as they did plant collecting and a little hunting, is a fair estimate of their subsistence activities.

The antler flaker and the chips would seem to indicate that these people did some chipping while they were living in the cave. A conical wedge for holding down skin, the scrapers, the ulna punch, the jaguar skin, and the shoe fragment would seem to show that one of their activities while in the cave was preparing hides. The spoke shaver, the pointed stick and various whittled objects seem to show that they did some wood working. Examples of string are not overly numerous. Most of it is S-twisted and done by hand and not by a spindle whorl. This is true of both cotton and hard or soft wild fibres. There are, however, a few pieces of cotton yarn that were done with a spindle whorl. Some of the string was made into simple loop nets, others were woven on a belt loom into cotton plain weave. No basket remains were found but there were two fragments of twilled mats, and one extremely small fragment of chequer-weave mat. One of the twilled mats seems to have a decorated border. However, for the most part they are plain. There also were found a few painted fibres in this layer that may be interpreted as indicating that we had some

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band. The squash remains would seem to indicate that perhaps it took place during the summer.

We have considerable evidence concerning their subsistence activities. Only twenty-five unidentifiable animal bones were uncovered and there was one identifiable deer bone flaker and a piece of deer skin. Artifacts that might be connected with the chase were the atlatl point of the Abasolo, Nogales, Mesa and Verde's types. However, much more numerous than atlatl points were the Catan, Matamores, Fresno, Starr and San Antonio side-notched arrow points. There also were numerous main-shafts, foreshafts. Much more numerous than the evidence of hunting was that of wild plant collecting. 2,842 wild plant remains were uncovered. Many of these were Huapillas leaves and stems. There were a few agave, cactus and chewed quids of other wild plants as well as a few wild squash seeds. The only implement that seems to be connected with wild plant collecting (except for the obvious nets) were thick and thin saw-like choppers. Agricultural remains also occur but are less varied and less numerous than in our previous horizons. There are only two varieties of beans; there are a number of cobs of corn but most of them seem to be of the Breve de Padilla race corn. There are a few strings made from cotton. Tobacco also occurs. The gourd fragments are fairly numerous but this does not seem to have been a food as we found none of these seeds in the feces. A single variety of pumpkin and warty squash also occurred. The only objects that might even vaguely be connected with agricultural remains are the pottery, particularly the ones that had burned food material adhering to their interiors. We also have a shell spoon that may have been used for dipping out some of this soup. Skin scraping activities evidently occurred during this brief occupation. The hammered wood wedge may have been used to stake down

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skins, the thick and thin flake side scrapers as well as the crescentric end scrapers may have been used for removing some of these fatty tissues. There also are antler piercers that could have been used to pierce the skin. We actually did find a number of fragments of skin, some being leather thongs, others merely pieces of deer skin with or without the hair attached and also one fragment of a huarache. As with the other horizons there are numerous pieces of string; most of it is S-twisted and soft fibres. A little cotton cord still appears. Some of the string and yucca strands were, of course, tied into a variety of knots. Some string was used for making simple loop net while other strings were used on a loom to make tightly twined blankets. There also is one single fragment of a piece of double cloth; it is decorated with an indigo blue dye. This piece of double cloth of course infers a much more complex type of loom. It may, however, be a trade piece, manufactured in another area. Simple twilled mats occur with squared corners on them and there is one chequer mat. There is also a fragment of paint dish which may have been used colouring fibres for decorating mats. Pot sherds are fairly numerous. The fancier variety of engraved or black burnished ware, and the earlier brown burnished ware seemed to have totally disappeared, though brush and corrugated wares continue. However, there are two new types: San Antonio red ware and San Antonio polished ware. Vessel forms like in the previous horizons are quite limited to a few simple bowls and a few simple water jars without any appendages or decoration. There are also a number of sherds which are trade of Huateca black and white. On the basis of the above evidence it would appear that we have a new culture entering the area, so we consider Occupation 15 to be a component of the San Antonio phase. The San Antonio projectile points, the crescentric end scrapers, the shell spoon, the twined rope, the double cloth, the San Antonio red and polished pottery all are diagnostic

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double cloth, the San Antonio red and polished pottery all are diagnostic

of this new culture. Other traits in the form of choppers and strings seem to be a continuation of the previous horizons.

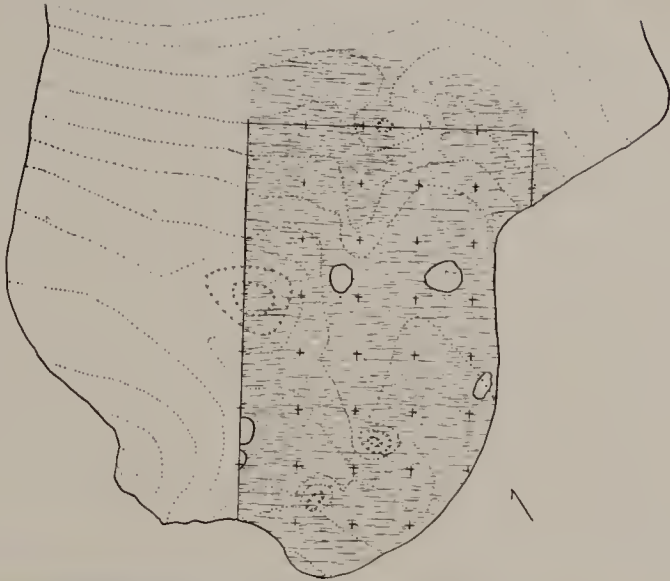


Fig. - Extent of Zone A, Occupation 16 in the excavated area of Romero's Cave.

Overlying the thin layer of cave dust in the front of the back of the cave, in the back Zone B-1 and in the front Zone C-1 was a thick vegetable layer which underlay ^{cave} ~~area~~ dust on the surface of the cave (Zone A1)

This top vegetable zone is called Zone A and was very extensive. I suspect also that our material ^{deposited as summer} could have ^{included remains} ~~been~~ dug both by treasure hunters and by the San Antonio people themselves. It is estimated there over 600 cubic feet of refuse in this stratum. There were three fire pits dug down from it, one grass lined pit and one burial pit. There are also numerous areas of patches of grass and a couple of mats lying horizontally in the layer that also may have been beds. On the basis of this I would suspect that here we are dealing with a macro band who occupied this cave for a couple of seasons, perhaps in the spring and the summer. 246 unidentifiable bones occurred as well as identifiable bones of deer, peccary, rats and birds. There were also a number of pieces of skin.

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More numerous than the bones themselves were many implements that might be connected with hunting. These include Abasolo, Nogales, Tortugas, Verde, atlatl points as well as atlatl mainshafts, and foreshafts. Still more numerous were Matamores, Catan, San Lorenzo, Jaumave, Fresno and San Antonio arrowpoints. There also was part of a bow and arrow mainshaft and foreshaft. There also were scrapers which would be somehow connected with hunting. Much more important than this activity, however, was wild plant collecting. Though we had 9,361 wild plant remains that were counted, there actually were a number more that were not counted. Most of these were desert cactus and yucca remains, but there were some wild squash fragments with them. The ~~apparent~~ flat and humped scraping planes and saw choppers could have been used to prepare these remains for food. Still an important activity was agriculture. There were many cobs of corn, mostly of the Breve de Padilla variety; there were two kinds of beans, gourds, peppers, warty squash and pumpkin. There also were cigarettes as well as fragments of elbow pipes. Metates and manos also can be connected with agriculture. The feces remains would seem to indicate that about 40 per cent of their activities was agriculture and about 40 per cent wild food collection, and as much as 20 per cent was hunting. This is roughly in agreement with the wild plant Material. However, this is somewhat different than the immediately previous horizons which showed somewhat more plant collecting than agriculture and less hunting. The pots and shell spoons may have been used to prepare this food for eating. Hammer wedges, scraper handles, bone awls and a piercer and an ulna punch, crescentric and scrapers, a scraper handle as well as deer skin, jaguar skin, a belt, a piece of shoe, a thong and a huarache and a leather bag indicate one of the most important activities at this time was the preparing of skins. Equally important was the making of pottery. This pottery like in the San Lorenzo horizon

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and the various other horizons is mainly black ware with some ~~corregative~~ ^{corrugated} ~~appearing~~ ^{adhering}. However, the San Antonio polished and San Antonio red ware indicate that we are dealing with a different horizon. Weaving continues to be important with ~~lots~~ ^{much} of string occurring and there are a few simple twilled mats with square ~~borders~~ ^{edges} and ~~a few simple twilled mats with square borders~~ and a few simple mats with chequer weave with square corners. Simple loop nets occur. Loom weaving occurs and there were plain weave, double weft and worf woven fabrics.

The Starr and San Antonio points, the crescentric scrapers, the clay pestle, the shell spoon, the plain elbow pipe, the double weft and worf cotton cloth, the reed flute, the distinctive twilled mats as well as the subsistence pattern and San Antonio polished and red pottery indicate that this is a component of the San Antonio phase. Many of the associated artifacts are similar to those of previous horizons, but we were unable to determine whether they are cultural continuities or merely mixing of older artifacts with the new ones they were using.

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SUMMARY

1944

YAMATO

1944

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The first of the four ships of the Yamato class was the Yamato itself, which was launched on August 4, 1940, and completed in December of the same year. She was the largest ship ever built by Japan, and was designed to be invulnerable to all existing and then-current weapons. She was armed with nine 460mm guns, and had a top speed of 27 knots. She was sunk by the USS Arizona on May 7, 1945.

